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Education in Kuwait, Bahrain and Qatar:

An Economic Assessment.

C. A. Sinclair

A thesis submitted for the degree of Doctor of Philosophy

Durham University, 1977.

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It should be said that although many people have advised me on this thesis, views expressed are solely my own responsibility.

Preface.

This thesis, as its title suggests, is based on a study of education in three Middle Eastern countries. They are found bordering the Arabian Peninsula and the "Arabian" Gulf, as it is known in those parts. The use of the pre-fix "Arabian" in this thesis is not intended to convey any meaning except to identify the region under discussion.

Inevitably, many of the sources consulted, and almost all of the primary data, were written in Arabic. The author has avoided transliteration and chosen instead to present the English translation. This is done not only for the ease of comprehension of the reader, but also because even the most detailed transliteration system can be confusing, and often is only readily comprehensible to those familiar with that system.

This study was begun in September 1972, and field-work concluded in August 1975. During that time the author spent several months in Kuwait, and a slightly shorter period in Bahrain and Qatar. A second visit was made to the area in March 1975, when each country was visited again.

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ABSTRACT

The notion of education as a cause of economic growth is considered for developed and developing countries. In the latter, it emerges as something of a mixed blessing, arguably creating more problems than economic growth. The impact of education appears to vary with each country which is considered, and this research is confined to Kuwait, Bahrain and Qatar. In the context of those three countries, the tools available to examine the effects of education, primarily on economic development, are studied. The two most appropriate are "rate-of-return" analysis, and "manpower assessment". Both have applications for the enquiry, but the stringent assumptions and data requirements of "rate-of-return" analysis limit its potential in the study. An approach which combines parts of both is chosen.

Before studying the development of education, the demographic features, labour market and economic development of each of our three countries is examined. The small number of indigenous citizens has led to a dependance on a large number of expatriates in the work-force. The extraction and sale of oil has dominated economic development, and the prospect of its ultimate exhaustion has led each country to pursue a policy of economic diversification. Often this has entailed industrial development and the importation of still more expatriate workers. Indigenous workers are often unwilling to take industrial employment, as conditions and pay in government is seen as a right by citizens, and an obligation by the government, who use the same as a means of income distribution.

All three countries have set priorities for investment in their human resources which are likely to enhance their plans for economic development, but the degree of success experienced in achieving their objectives varies.

In Kuwait the educational system does not appear to be meeting either the aims of educationalists, nor the economy's need of manpower. Factors contributing to this situation include the government's "open-door" employment policy for nationals and relative pay scales in government employment. The net effect of these two factors is to create a divergence between the return to training programmes and jobs which are, in social terms, beneficial and those which are in private terms more rewarding.

The position in Bahrain, with a maturer economy, and in Qatar, a relative newcomer, is quite different. These three countries provide an interesting and useful basis for comparison.

Although education by itself seems unlikely to cause economic growth, it appears that its contribution is greatly enhanced when policies of economic development and employment are adopted which are consistent with the aims and potential of the educational sector.

CHAPTER 1.INVESTING IN PEOPLE THROUGH EDUCATION.1.1 Introduction.

Studies of "economic development" have often suggested or implied that economic growth may be enhanced or even caused by investing in human capital, people. Evidence to support this view has come from macro-economic studies of the components of National Income growth and from micro-economic studies of the economic return from investment in people, through education or training. But studies of the relationship between education and economic growth done over several countries, have not discovered a significant relationship between the two. On the contrary, many developing countries have found that far from promoting economic development, education creates a series of problems, including a rapid rural to urban migration of school leavers, an ever increasing social demand for education concurrent with rising levels of "educated unemployed". Often governments are unable to resist the demand for education, and so scarce resources are wasted.

In Section 1.2 we discuss briefly the development of the idea of "human capital", and look at various attempts to link education to economic growth. Then we examine the experience of individual countries with education. It seems that the effect of education varies considerably from one developing country to the next. Therefore we limit our study to three similar countries, found in the Arabian Gulf, Kuwait, Bahrain and Qatar.

1.2 Education and Human Capital

One of the earliest attempts to examine the contribution of education to human capital formation was made by Strumlin,¹ (1966,

pp.276-323)* for Leningrad Metal Workers. He identified human capital with "skill level", and this he measured by wage level. When other factors affecting skill level, such as age and work experience were allowed for, he found that the first three years in school added proportionately more to the overall skill level than any other period of equal training² (Ibid.,p.290).

In 1935, Walsh³ (1935, pp.255-285) attempted to find support for the idea that market forces lead to the equalisation of the return on all forms of capital. He studied the return to investment in various professions and compared this with the alternative market rate of interest. Contrary to his hopes, he found the rate of return to the professions was consistently higher than the alternative market rate of interest.

After the Second World War there was a considerable revival of interest in the role of people in economic growth and the return to educational investment⁴ (Friedman and Kuznets 1945, et.al.). Several factors contributed towards this renewed interest. In both Europe and America it was noticed that national output rose faster than the amount of land used, man hours worked and the stock of reproducible capital used. The unexplained increase may be the result of increasing returns to scale - or to an improved quality of inputs. An additional input, which represented the "residual" factor in economic growth, was added to the other factors of production, and the components of this "residual" factor were studied by Denison. He suggested that education was responsible for a major part of the residual factor and was:

* Full references are found at the end of each Chapter, and are indicated by numbers. A note to the reference in brackets, thus (), is included where it is thought to be helpful to the reader.

"a source of 23% of the growth of total real income in the United States between 1929 and 1957".⁵ (Denison, 1962, p.127).

though this somewhat bold declaration was not based entirely on proven conclusions.

An additional stimulus to the study of the economic value of human capital was given by the remarkably short time European economies took to recover from the Second World War. Particularly struck by this, Schultz,⁶ (1961, p.2) defined five ways of adding to the stock of human capital. These were: health expenditures, on-the-job training, formal education, adult education; expenditures which increase labour mobility.

Here, we are more concerned with additions to the stock of human capital made by investment in education and training. Becker made one of the earliest general analyses of the return to investment in education. He took as a case study the return to high school and College education in America.⁷ (Becker, 1964).

Since Becker's work there have been a great number of studies made of the return to investment in particular occupations and to particular levels of education⁸ (Psacharopoulos and Hinchcliffe, 1973). Usually, the discovered rate of return is higher than the alternative rate for physical capital.

The work done by Denison on the contribution of education to economic growth and the individual studies on the rate of return to investment in education tend to support the view that education has a positive contribution to make to economic growth, and perhaps is a cause of part of it. However, it is difficult to reach firm conclusions on this point, as "education" and "growth" are somewhat elusive concepts to measure.

Education may be a consumer good as well as a form of investment. Schultz⁹ (1963, p.38) describes education as consisting of "present consumption, future consumption, and future producer capability

(investment)". If education is a form of consumption, then rises in G.N.P. per capita will result in increased educational spending. If it is an investment, then educational spending will result in a higher level of G.N.P. per capita in future years. If it is both a consumer good and a form of investment, then inspection of the relationship between education and economic growth is rendered extremely difficult.

While most of the evidence on the contribution of education relates to developed countries, our primary interest is in developing countries. In the latter, economic conditions are rapidly changing, and the information that is available about this change is often limited. To discover if education has the same positive effect on economic development in developing countries as it is thought to have in developed countries, we have to use a different approach from the ones already mentioned.

One such alternative approach is to accept as a hypothesis, that educational investment does cause economic development, and then to inspect these two in a number of countries. For this analysis we require two kinds of data: first, some measure of education investment, or "human resource development" (the "accumulation of human capital and its effective investment in the development of an economy")¹⁰ (Harbison and Myers, 1964, p.2), second, some measure of economic development.

There are no perfect measures of either of these two. We can use any of the following as indicators of human resources development: the number of teachers or doctors per thousand persons; the literacy rate; the educational attainment of working persons by occupational group; the ratio of primary, secondary or tertiary enrolments to the total relevant age group. A serious inadequacy of these indicators is that they reflect investments in formal training, and have no reference to skills acquired on-the-job, or in other informal ways. However, most of them are known for a wide range of countries.

Similarly, we do not have a completely satisfactory measure of economic development or under-development. Gross National Product per capita and the Consumption per capita are useful indicators of economic development, for some countries, but do not give any indication of the personal distribution of income. Ideally we require a composite index, including a variety of factors which reflect economic development. Almost all the work done has taken Gross National Product per capita as the indicator of economic development.

Amongst the attempts that have been made to test the relationship between education and economic development, perhaps the best known is that of Bowman and Anderson¹¹ (1963, pp.247-280). They began their study with the task of finding:

"To what extent is literacy.... an essential ingredient of economic advance".¹² (p.250).

They found very little association between literacy and Gross National Product (G.N.P.) per capita for the ninety countries they considered, and still less association for higher levels of education and G.N.P. per capita. However, they did find that to achieve a National Income per capita of more than U.S. \$ 300 (1955) a minimum literacy rate of 40% was a necessary, though not a sufficient condition. Also, to achieve an income of more than U.S. \$ 500 (1955)¹³ (p.255), a 90% literacy rate was a necessary, though not a sufficient condition.

Harbison and Myers¹⁴ (1964, p.31) grouped seventy-five developed and developing countries into one of four categories of human resource development: underdeveloped, partially developed, semi-advanced and advanced. They argued that their research provided evidence of a statistically significant relationship between the level of development of human resources and G.N.P. per capita. Specific indicators used by them were secondary and tertiary enrolment ratios, weighted to create the closest correlation with G.N.P. per capita.

Harbison and Myers have made the useful observation that countries can be grouped into roughly similar stages of development of their human resources. Their conclusion, that education has some causal effect on economic development, depends on the use of very dubious methodology, and cannot be accepted at face value.

However, their work gives implicit support for Bowman and Anderson's conclusion that necessary but not sufficient levels of educational attainment can be defined for certain levels of economic development. But when those authors inspected time series data they found that income per capita in 1938 explained levels of literacy in 1955¹⁵ (1963, p.265) better than levels of literacy in 1938 explained income per capita in 1955. In other words, while we can define the contribution of education to economic growth only in terms of "minimum necessary levels", we find from inspection of time series data that income is more a cause of educational spending and levels of educational attainment than education is a cause of economic growth and higher levels of per capita income.

The absence of an identifiable relationship between education and economic growth over a wide range of countries suggests either that there is no relationship between them, or that indicators have been used which are too crude, or that the studies have been so aggravated that they have not taken into consideration other factors which might be significant.

The briefest examination of the experience of individual developing countries from 1960 to the present time, with education and training programmes, reveals that far from encouraging economic growth they have been associated with unemployment. Unemployment has been a prominent feature in developing countries for the last fifteen years,¹⁶ (Turnham, 1973, pp.42-43) particularly in urban centres, and it has been said that "of the factors that have contributed to the present

crisis (of unemployment) none is more important than the sheer growth of population"¹⁷ (I.L.O., 1971, p.1). Discussing factors which might affect employment statistics, Blaug wrote that "the effect of population growth easily outweighs all the other factors"¹⁸ (Blaug, 1974, p.10). Nevertheless, the decision to develop education implicitly reflects a decision not to develop health services or to invest in physical capital. While developing countries may have little control over population development, they are able to choose between educational spending and other forms of investment. It is therefore legitimate to enquire if the return to educational investment has been sufficiently high to justify the opportunity cost involved. We may gain an impression of this by considering certain aspects of employment and its relationship to education in some developing countries.

It can be argued that education only converts disguised unemployment, or underemployment in the rural sector into open unemployment in the modern sector. By providing children in rural areas with school certificates, migration to urban centres, where wage rates are many times higher than in the subsistence sector (or are expected to be so)¹⁹ (Todaro, 1973, pp.94-106) is facilitated. But if migrants are unable to find productive employment, then in the short run the social investment of their education has been wasted. There may be an accumulated benefit which follows from the kind of circular migration Elkan found in East Africa²⁰ (Elkan 1973, pp.106-115). Migrants who fail to find the job they seek in the cities, or who save the requisite sum, return to their home village. The education and experience of conditions outside the village environment of returning migrants may enhance rural development, and increase agricultural output. But such benefits apparently do not occur when the pattern of migration is international²¹, (Bohning, 1975, pp.251-277) and for the same reasons, may not occur when it is intra-national.

As well as encouraging rural to urban migration, education is believed to create a "mis-match" between expectations and job opportunities. Graduates of schools or colleges arrive at the labour market seeking a certain type of job, which proves either to be unavailable or to be already filled²² (Emmerij, 1973, pp.31-42). In the hope of gaining the desired job, they remain unemployed. While it may be possible to justify, privately, an extended period of searching for a job, the cost of this activity in social terms is considerable.

When discussing evidence which illustrated this phenomenon for Sri Lanka in 1969-70, Dudley Seers wrote:

"In brief, what seems to have happened is that the expansion of the educational system has out-run the capacity of the economy to provide the sort of jobs that those with secondary school qualifications feel they are entitled to expect - broadly speaking, office jobs. This expectation would have been justified in the 1950's. Moreover, it is not foolish of them to wait for such jobs. To wait may well be justified. A white-collar job pays a salary which is several times as high as that for manual work; it provides much greater security; and it means incomparably higher status. School leavers undoubtedly reduce their chance of hitting this big jackpot if they accept a manual job. So, whatever the cost to the country of their waiting for a "proper" job, to do so may well be perfectly rational from a personal point of view" ²³ (Seers, 1972).

Essentially, the problem is too few jobs which require secondary school graduates, relative to the number of secondary school leavers. Education can hardly be blamed for the fact that secondary school graduates engage in job "searching", but when it occurs, there is a clear implication for educational planners.

In a number of developing countries a relationship exists between educational attainment and incidence of unemployment, which Blaug has characterised as an inverted U-shape²⁴ (Blaug, 1974, p.9). Unemployment is high amongst those with secondary education, lower for those with, say, primary school education, and for those with higher education. Ceylon and Iran are found to have this kind of relationship, while Columbia, Kenya and Peru experience a more conventional negative relationship between

education and unemployment²⁵ (Blaug, 1974, p.9). If, in some circumstances, more education does "make people less employable", further doubt is cast on the ability of education to enhance economic development²⁶ (Blaug, 1974, p.9).

Irrespective of any relationship which may exist between education and unemployment, the phenomenon of the "educated unemployed" is familiar in developing countries. The educational attainment of those whose incidence of unemployment is highest varies. "In Asia, the problem groups are usually university and secondary school graduates; in Africa, mainly primary and secondary school leavers. But in most countries, the unemployed educated form a large and growing section of the total unemployed, amounting to one third or more of the urban unemployed"²⁷. For most governments the presence of an articulate group such as this is disturbing, and often steps are taken to diminish unemployment by expanding government employment. In the Sudan, this process has been formalised by the Employment Relief Fund, whose purpose is to pay the wages of graduates from higher secondary schools and the two universities, who would otherwise be unemployed. In 1971 more than 50 per cent of that year's graduates were reportedly kept "employed" in this manner²⁸ (Mulat, 1975, p.11). Without this intervention, the high incidence of unemployment amongst graduates would presumably reduce their supply by discouraging others from going to university.

The opportunity cost of the resources spent on training university graduates and subsequently making transfer payments to them is considerable, and for a country like the Sudan, consists of forgone investment which could otherwise be used to create productive employment.

1.3 Conclusion

Studies of education and economic growth in developed countries have suggested that there may be a causal relationship between them,

but which factor is dependent on which is ambiguous. The influence of education on economic development in developing countries is still less certain. At times, education appears to contribute to the unemployment problem, and to be indirectly responsible for a mis-allocation of resources. But the impact of education on economic development varies with each country that is considered.

For the remainder of our enquiry we will examine the development of human resources and its relationship to economic development in three countries: Kuwait, Bahrain and Qatar. Our study will attempt to answer two questions: (1) in what ways does the investment in human resources hinder or assist economic development: (2) is the allocation of educational and training resources appropriate, given the aims of economic development and the aims of government educationalists.

By limiting the study to three similar countries, we gain a considerable advantage over more catholic studies in the attention we can give to detail. But our conclusions may be limited in their application to countries similar to those included in our study.

Economists have often stressed the constraint which financial capital is to economic development. Kuwait and Qatar have a temporary surfeit of financial capital, and relatively, other factors constrain their development more harshly, one of which is their shortage of labour, qualitatively and quantitatively. Bahrain, on the other hand, has a shortage of financial capital, and is relatively well endowed in terms of labour. Because of this a study of the development in human resources in the context of the economic development of these three countries is particularly interesting, and may prove to have conclusions useful not only to similarly endowed countries, but also, by comparison, for more typical developing countries.

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CHAPTER 2.

THE DISPOSITION OF EDUCATIONAL RESOURCES.

Introduction.

In Chapter One we established that we would look at ways in which education encouraged or retarded economic development, and in particular whether the distribution of resources within the "educational" sector was one which would encourage the economic development of the countries in our study. In this chapter we will consider different ways of assessing the allocation of educational resources, and eventually select one, or a combination of approaches, which we will use. Our choice is made on the basis of what appears to be feasible and useful, given the limitations of each method and the data available on the countries in which we are studying the development of human resources.

2.1. Approaches to Distributing Investment

Three approaches are commonly used when distributing educational expenditure. These are known as: the "social demand" approach; rate of return analysis; and manpower assessment. Given the aims of our enquiry, the social demand approach can be discarded. In it the principle which governs educational spending is that the demand for education should be met at all levels. No reference is made to the opportunity cost of educational spending or to the relative benefits of different kinds of spending. It is surprising that this approach to educational expenditure accounts for "were the truth told, nine tenths of educational planning around the world"¹ (Bereday, et.al., 1967, p.85).

The Robbins Report of 1963 for the U.K. provides an example of it² (Cmd.2154, 1963). The authors said that the sufficient condition

for expansion of any type of higher education was that "courses should be available for all those who are qualified by ability and attainment to pursue them and who wish to do so"³ (Ibid., p.8). In spite of the subsequent over-expansion of higher education in relation to job opportunities for graduates, in 1973 the government's White Paper on Education repeated the same philosophy as a basis for educational expansion⁴ (Cmd. 5174, 1973, p.34).

The two approaches left have a stronger basis in economic theory, but strict comparison between the two is not possible as they have different functions. Rate of return analysis compares the returns to different investments in human capital, while "manpower assessment" usually takes the form of an appraisal of the demand and supply of different skills now and in the future. Rate-of-return analysis gives a guide to the most profitable area for investment, while manpower assessment is useful in knowing how much to expand or contract educational and training facilities. With the former approach we arrive at a financial appraisal; "more could profitably be spent on primary education" or "too much has been spent on University education", while the latter gives a numerical appraisal, "there are too many University science graduates", or "there are too few skilled craftsmen". Each approach has implications in terms of the other, and each appears to be useful potentially for our own study. There is a clear distinction between the two in their methodology, and assumptions. Before choosing one, or a combination of these two approaches, we shall first examine each in greater detail to see how far it is possible to use them for our study.

2.2. Rate of Return Analysis

Studies of the rate-of-return to investment in human capital developed from the idea that people could be considered as "capital", and could be invested in through expenditure on education, training or health facilities⁵ (Schultz, 1961).

An educational investment in human capital has (in common with an investment in physical capital) a cost, and a resultant benefit⁶ (Blaug, 1970). The benefit is seen in the increased earnings which follow from the training or education. The cost consists of the range of items associated with the investment, teachers' salaries, rent of the building, books, foregone earnings whilst training, transport, etc. We must distinguish between "social" and the "private" rate-of-return, as society and the individual must measure different costs and benefits. Society measures as the benefit the increased pre-tax earnings of the individual, as these approximate to his marginal product, and as costs, all the items of expenditure involved. An individual measures the increment to his post-tax earnings, and includes as costs only items which are a cost to him. If travelling is involved, then the individual measures the cost to himself of travelling, but society has to measure an individual's share of the entire transport cost. These distinctions extend to all the other items involved in the investment, such as books, meals, clothing, etc.

As well as the direct costs and benefits of an investment in people, there are indirect ones, known as "externalities". Externalities of education might be an improved re-training capacity of the work-force, increased entrepreneurial activity, and so on. On the other hand, externalities may prove to be "negative". For example, educational investment may lead to dissatisfied school leavers, who disrupt society, and thereby discourage investment. In practice, estimates of the return

to investments in human capital tend to ignore "externalities", as when two similar types of investment are being compared, it is argued that there is a comparable benefit or loss from externalities.

With this outline of "rate-of-return" analysis in mind, we will now discuss some of the criticisms which have been made of its use. Rate-of-return analysis of educational investment is open to criticism on a considerable number of points, some more substantive than others. Here we deal with those more relevant to this study. Most criticism is levelled at various aspects of the measurement of "benefits". But one point concerns the measurement of "costs". If educational spending is an investment in people, then we measure the benefits of the investment by the improved earning capacity of individuals, and its cost by measuring the expenditure involved. However some part of those expenditures may not be directed towards raising the productivity of the recipient, but rather to increasing his personal pleasure or consumption⁷ (Blaug, 1970, pp.19-20). In this case it would be incorrect to account the entire cost as an "investment", and making an accurate adjustment to the cost to allow for this is extremely difficult. If no adjustment is made, the calculated rate-of return is under-estimated, and probably seriously so, as because of discounting, the early years, when costs occur, tend to be much the most significant.

When measuring benefits, criticism has been made of the necessary transformation of current earnings, derived from cross section data, into future earnings. This transformation is open to criticism on two counts, and both apply with more force to developing countries than to developed. First, no account is taken of the inevitable shift in sectoral and occupational employment structures. The present blend of skilled, semi-skilled and professional labour is unlikely to be the same as that found in the future. Morgan⁸ (1962, p.331) found a

radical change in the blend of occupations in America between 1910 and 1950. Second, the observed cross-sectional wage rates provide no idea of the dynamic changes in those wage rates over time. In societies where change is likely to be rapid, cross-section data can be used less reliably to indicate future relative rewards than it can in societies with a mature economy⁹ (Blaug, 1970, pp.23-26; Balogh and Streeten, 1968, p.387).

The most serious criticism of the measurement of benefits of education concerns the assumption involved when estimating social rate-of-return, that wages reflect marginal product. Differences in wages are taken to reflect differences in marginal product. It is generally accepted that while this may hold for a perfect "market" economy, it is as untrue of developed western economies as it is of poor third world countries. Wages may reflect one hundred factors unrelated to productivity, including union power, restrictive practices, or a "monopoly rent on (1) the scarcity of parents who can afford to educate their children well, and (2) the restrictions on members permitted into a profession in which existing members have a financial interest in maintaining scarcity"¹⁰ (Bulogh and Streeten, 1968, p.287). What do wages reflect in an economy which has an "incomes policy", or where nationality is a pre-requisite for particular jobs? Although wages, in theory, reflect productivity, in practice they often do not. However this point is important only when social rates-of-return are under study. Private rates-of-return provide a basis on which decisions concerning personal investments in education can be made. The economic origin of earnings is unimportant to the individual, but what is essential is a certainty of what they will be.

Yet another difficulty encountered when measuring the return to an educational investment stems from the fact that "an individual's earnings are not wholly determined by education. A short list of other

leading factors will include: location, occupation, sex, race, age, physical condition, drive and intelligence, including both psycho-motor and intellectual skills. A simple bivariate analysis always leads to an over-estimation of the influence of education on income"¹¹ (Merrett, 1966, p.296). When studying the contribution of education to the growth of real income Denison assumed that:

"differentials in labour earnings due to differences in education equal sixty per cent of observed differentials in money income of adult males of the same age classified by years of education"¹² (Denison, 1964, p.34).

Previous to and independent of Denison's work on national income growth, Wolfe and Smith¹³ (1956) had studied the economic value of the education of "high school graduates", and when doing so used a factor to correct income differentials to allow for non-educational factors of "two-thirds" or 0.66%. This gave some support to an important assumption in Denison's work. Consequently, earning differentials are usually adjusted by 0.6 or 0.5 to allow for other factors which influence earnings and which are usually correlated with education. If the sample which is under study is large enough, multiple-regression analysis may be used to separate the effects of education on earnings from the effects of other correlated factors¹⁴ (Psacharopoulos, 1973, p.28).

To decide whether these criticisms apply to our study we should consider each in the context of our area. This we now do.

2.3. Application

Two ways of using rate-of-return analysis have been mentioned; either we use social rates-of-return to study the disposition of educational investment, or we use private rates-of-return to understand and predict individual behaviour in choosing different types of personal investment in education. The study of social rates-of-return is directly applicable to our enquiry, and it may be that private rates-of-return could also be useful. We will consider the validity of three important assumptions of social rate-of-return analysis in our area: (1) educational spending is solely an investment; (2) current relative prices can be used to predict future ones; (3) relative wages reflect relative marginal productivity.

(1) Investment in Consumption of Education.

If we are to use social rate-of-return analysis, we must either assume that educational expenditures are solely "investment", or estimate what proportion of the total is absorbed by consumption. When making this judgement we should consider the motive of the state, and those who have the opportunity to invest in or to consume education: pupils and students. In the countries of our study, social services are often provided as a means of income distribution, and occasionally even government employment can also be described in this way.¹⁵ But policy statements by the Ministry of Education tend to stress the investment component of educational spending. In Chapter Six, the aims of education in each country are stated, in so far as they can be discerned, and they show the investment orientation of educationalists.

It is reasonable to assume that education is planned as an investment. But when those who have the opportunity of education are considered, the issue is more complicated. To start with, government schools in our area often offer as many as half the total number of

school places to non-nationals.¹⁶ Their education is purely a charity or an obligation governments feel they have, which offers no certain economic return. Some non-nationals may choose to reside where they are educated, but they are free to move. Turning to nationals, we must distinguish between boys and girls. In our area, for religious and social reasons, few women work in paid jobs. The situation is changing slowly, and generally women of the younger generation tend to be more economically active than those of the older generation, but much of the educational resources devoted to their education cannot be counted as investment. The only group whose education could qualify as solely "investment" is that of male nationals. So a pre-requisite to a study of social rates-of-return would be to separate out from all educational spending that share accounted for by male nationals and those female nationals who will be "economically active".

The attitude of male nationals to the education they receive is also a factor in determining if education is consumption or investment. There is no exact way of measuring this, but we could describe the situation where education was regarded solely as an investment by pupils. Presumably pupils would strive for success in annual exams in order to avoid repetition of academic years and to reduce the cost of foregone earnings. We would find that the number of years "repeated" was low, and that the average age of a class would be close to the minimum possible.

When we come to inspect "pass rates" in examinations or average age of a particular class, we find that almost always, male nationals fail exams more often, and have a higher average age than any of the other groups. Tables 6.3. , 6.5. , and 6.9. , of Chapter 6 illustrate the higher "failure" and "repeater" rates of male nationals in comparison with other groups. Table 2.1 shows for government secondary schools in

Kuwait and Qatar, their higher average age than other groups.

TABLE 2.1. AVERAGE AGE OF ALL PUPILS IN GOVERNMENT SECONDARY SCHOOLS IN 1970/71 (KUWAIT) AND 1973/74 (QATAR).

<u>Country.</u>	<u>Group</u>	<u>Average Age</u>		<u>Total Number.</u>
		<u>Years</u>	<u>Months</u>	
Kuwait:	Kuwaiti Boys	16	11	4845
	Kuwaiti Girls	16	5	4175
	Non-Kuwaiti Boys	16	6	4369
	Non-Kuwaiti Girls	16	2	2608
Qatar:	Qatari Boys	18	2	1204
	Qatari Girls	17	7	649

Source: Ministry of Education, Annual Report, 1970/71, Kuwait, pp.103 & 104 (Arabic).
Ministry of Education, Annual Report, 1973/74, Qatar, p.130 (Arabic).

This suggests that for some reason male nationals approach their education in a more casual way than other groups who have the opportunity of education. In so far as low "pass rates" and a high average age reflect the "consumption" of education, we may say that male nationals appear to engage in "consumption" of education.

Before using the social rate-of-return approach, we would have to identify the proportion of educational spending particular to male nationals, and make some estimate of the proportion of educational spending on male nationals which was not "investment". Both these tasks would, in practice, be very difficult to undertake. It is thought that even the most careful assessment would be a "best guess" of what is almost unmeasurable.

(2) Current prices and future prices.

A rate-of-return analysis would require the transformation of current data on relative wages to be converted into time series data. Our problem is to decide whether the relative wages and prices we find today in the countries we are studying are likely to reflect reasonably accurately those which will occur tomorrow. There are two reasons why

they appear to be poor indicators.

The countries in our study are, by some measures, "developing". Their economies, funded by oil revenues, are changing rapidly. A consideration of their development over the past ten or even five years would reveal a dramatic pace of change. Each country, Kuwait, Bahrain and Qatar, has plans to alter their present pattern of economy, often by developing an industrial sector. In an environment where change has been, and still is, so rapid, there is little reason to think that relative prices will remain constant. Also, entirely new jobs will occur and a lifetime earnings profile for those jobs would have to be assumed.

A second reservation about the stability of current prices stems from the dependence of each economy on its oil revenues. The price of oil determines, to some extent, the pace of economic development. In 1971 the government "take" on a barrel was K.D. 0.3 and in 1974 K.D. 2.94, which at 1971's prices was K.D. 2.13, i.e. after allowing for Kuwait's domestic inflation between 1971 and 1974. If the Dinar had not appreciated against the Dollar between 1971 and 1974 from \$ 2.80 to \$ 3.4 per Dinar, and if domestic inflation had not eaten away the domestic purchasing power of the Dinar, government take per barrel would have been K.D. 3.57 as against what it was in real terms (1971 = 100) K.D. 2.13. Besides the uncertainty which surrounds the price of oil, and relative rate of depreciation of currencies and inflation, ultimately, the exhaustion of reserves is inevitable.¹⁷ As it is probable that economic conditions, relative prices and wages will change in the next thirty years, current relative prices do not seem to provide a good basis on which to predict future ones.

3. Wages and marginal productivity.

Social rate-of-return theory depends upon, (amongst others), the assumption that people are paid a wage which reflects their marginal productivity. An investment in a person through education raises his marginal product, and as a result he will command a higher wage. For social rate-of-return analysis to be valid, we have to know if relative wages and salaries of nationals reflect their relative marginal productivities.

In Chapter Four, the labour market of each country is discussed. In Kuwait, a sharp division is found between the jobs and sectors in which nationals and non-nationals work. Most nationals work for the government, and there, wage or salary is fixed according to an administrative scale. Little is known exactly about hiring procedures, but it is thought that age, experience and education are taken into consideration. In Chapter Four, we show that the government of Kuwait has used employment in government service as a means of distributing some of Kuwait's wealth between citizens, and it is thought that wages reflect a combination of welfare payments and a wage for a job. Other researchers might be able to identify a link between wages and productivity in government employment in some countries, but here, with relatively little information available on hiring practices, job function or promotion procedures, we are not able to do so. Our suspicion is that if most nationals work in the government, and their pay is set according to an administrative standard, and is unrelated to a market price, then it seems unlikely that wages do bear much relation to marginal productivity.

While little is known about wages and salary structures in Qatar, in Bahrain, it is thought that wage levels are set, more or less, according to market forces. The government accounts for a small proportion of employment, and only recently has enjoyed sizeable oil revenues. In Chapter Four we discuss the nature of pay and the role

of government further. From the evidence we have, it seems that the greater the role of government activity, the less wages reflect productivity. Given the nature of employment, wages in Bahrain appear likely to reflect better marginal product than they do in Kuwait in the public sector, where most Kuwaitis work.

2.4. Private Rate of Return Analysis.

Before summarising the discussion of rate-of-return analysis, we should mention the possibility of using private ones. Many of the assumptions which social rate-of-return analysis uses do not apply when private rates are calculated. First, the thorny problem of whether education consists of investment or consumption diminishes in significance, as for the individual the only cost of education in our area consists in foregone earnings involved in extra schooling. However, the individual may, of course, derive additional pleasure from further schooling, for which it would be difficult to allow. The equally intractable problem of whether wages reflect marginal product or not also loses much of its significance. The individual chooses between different investments, and for him, certainty of the eventual returns is of paramount importance, not their economic origin.

One drawback of rate-of-return analysis holds for both "social" and "private" studies; "cross section" data has to be transferred into "time-series" data. But if one is attempting to explain individual behaviour, one need only project current information as far ahead as the individual himself is likely to do. An individual could be expected to estimate his earnings for the next ten years, and to make a comparison of rates-of-return on alternative investments over that period. Therefore this type of study does not face the same drawbacks when converting cross section data into time-series data as studies of social rates-of-return do. However, we have one additional problem. If individuals are uncertain that a differential which currently exists will continue, they may base their decisions on what they expect will happen to the differential. This might lead to behaviour which was apparently contrary to the signals of the market. This is only a

minor reservation, and it would seem unlikely to be widespread in our area. Moreover, if we have a reasonably high discount rate limiting the period of comparison of earnings profiles to say, ten years, this probably leaves the overall result unaffected.

A study of social rates-of-return to different educational expenditures would be relevant to our enquiry. However, this approach requires a formidable amount of data, much of which is not available, and depends upon the validity of uncertain assumptions which are scarcely defensible in the area of our enquiry.

2.5. Manpower Assessment

"Manpower assessment" represents a considerably different approach from rate-of-return analysis in appraising the allocation of educational resources. It assumes that economic growth will generate a demand for labour which will be met by a supply of labour coming from schools and training institutions¹⁸ (Ahmad and Blaug, 1973, pp.1 - 25). In more conventional manpower assessments, no reference is made to the cost of education, nor to the benefit to the economy from different skills. All skills are presumed to be equally valuable in the economy, once a demand for them has been identified. Usually, manpower assessment concentrates on key occupations which are thought to present a "bottleneck" to economic development. It is an approach most often used when a labour market does not exist, or functions only in a limited way, and where economic development is likely to be rapid. The initiator of this approach was Parnes, whose method was used in the "Mediterranean Regional Project", the M.R.P.¹⁹ (1963). The M.R.P. was a "manpower plan" for each of several countries bordering the Mediterranean. Parnes' original work, and the Project itself, initiated a considerable amount of discussion, much of which was critical of the approach²⁰ (Hollister, 1965; Cash 1965).

The bare bones of "manpower assessment" consists of five steps:

- (1) the identification of the occupational distribution of employment in the base year of the assessment;
- (2) economic growth over the period is estimated;
- (3) the additional employment generated by economic growth is estimated, after making an assumption about productivity trends;
- (4) the additional employment requirement is translated into an educational requirement, by assuming that certain jobs require particular types of training;
- (5) the future demand for educated labour is compared with the anticipated output of schools and

training institutions. From the comparison, the requisite adjustments to the educational system and training institutions are evident.

Various aspects of "manpower planning" have been criticised, including the crudeness of the approach, the lack of reference to "costs" or "benefits"²¹ (Blaug, 1970, p.167) and the derivation of additional employment from economic growth²² (Blaug, 1970, p.165). Also, the transformation of a demand for labour into a demand for people with a set of educational qualifications is criticised. So also is the inflexibility assumed in the blend of labour necessary to achieve a particular output. The assumptions concerning "productivity" which are necessary when deriving a demand for labour from economic growth have also been questioned²³ (Hollister, 1965, p.138; Blaug, 1970, pp.153-162). Moreover, a manpower assessment of this kind defines the necessary work-force for a particular income level²⁴ (Jolly & Colclough, 1973, p.217). But what of the labour requirements up till that level, and is any combination of skill ever necessary to achieve economic growth?

Less serious criticisms of manpower planning generally concern some aspect of the technique of estimation; a lack of sensitivity in one factor; the absence of informal training in the estimate of the supply of labour²⁵ (Jolly & Colclough, 1973, p.249).

Manpower planning is most heavily criticised when a "plan" has been drawn up which defines future economic growth and relates this in precisely numerical terms to the educational sector. A more useful way of using the "manpower planning" technique is to outline the implications for the educational sector of several levels of economic growth, including say a "rapid growth" model, a "most likely growth" model, and a "zero growth" model. To assess the current disposition of educational resources and the direction of educational spending, one of these scenarios would have to be chosen, but at least we would have

defined the maximum limit of error.

Some of the criticisms of manpower assessment do constitute potentially serious drawbacks for our study. We will deal with three points of criticism: (1) the estimate of additional employment; (2) the conversion of a demand for labour by skills into a supply of school and college leavers by educational attainment; (3) the lack of reference to the costs of education, the labour market, or to the relative economic benefit of different school and college graduates.

(1) Estimating future employment

Estimating the additional employment which economic growth generates may involve at least two difficult steps. First, estimating the growth of national income, and second, relying on an assumed relationship between income growth and the demand for labour. These two problems can be partly ameliorated by disaggregating any growth estimate into sectors and subsectors, but the difficulty with estimating changes in productivity, technology and the blend of skills over time remains. An approach based on National Income growth estimates would be impossible for our countries, which do not have national "plans" and where National Income depends most heavily on the price of oil, and to a lesser extent on such factors as the absorptive capacity of the economy and government intervention. An alternative way of estimating future employment is to do so directly, using current employment trends and by examining the direction of economic development. This somewhat crude method might be preferable to more ambitious methods, given that we have some knowledge of current economic development and current employment levels, but no reliable data on national income or productivity. By this approach we would obtain some rather subjective estimates of employment growth, but we could use a variety of estimates and thereby define at least the limits of employment growth. If each different model

of employment growth had fundamentally different implications for the disposition of educational resources, then to make an assessment we would have to choose one of our estimates as the "most likely" one. Each might give approximately the same implication, and only differ in degree. Then we could at least identify the area and direction of change unambiguously.

(2) Relating Skills to Educational Attainment.

A considerable amount of research has gone into studies of education and training requirement of jobs. Eckhaus took a job specific approach for 4,000 occupations in the United States, and defined the "education" and "vocational training" required by each one²⁶ (Eckhaus, 1955). Unfortunately, Eckhaus' work is specific to American schools and colleges, and American jobs, and cannot be readily applied to a developing country. Parnes, in his work, divided all the I.S.C.O.²⁷ occupations into one of four groups with common education and training backgrounds²⁸ (Parnes, 1962, p.77). His assumption was that many jobs have similar kinds of educational or training backgrounds, which seems reasonable. However, there are more than four distinct groups of jobs with similar training backgrounds. For example, there is clearly a difference between the training which doctors or engineers require to that required by technicians. The training which clerical or office workers require is also quite different to that which skilled manual workers require. Some jobs require no skill at all, and again these constitute a separate category.

A division of the I.S.C.O. into seven groups of jobs with common education/training backgrounds applicable to the Middle East was made by the Jordan Development Board.²⁸ Their classification of occupations and educational attainment represents a balance between the detail of Eckhaus and the aggregation of Parnes' study. Designed for use in the

Middle East, the Jordan classification provides a reasonable working basis for relating jobs to educational or training background; but it limits an enquiry to only seven levels of education and training.

These seven levels are well defined for discussing the educational and training system of our countries. Whatever classification system we use, the I.S.C.O. titles do not define every job precisely, nor do people in a particular job always have the defined education or training background. However, it is thought that there is a sufficiently high correlation between job group and defined education or training background to permit the adoption of the Jordanian classification in our area.

(3) The Costs and Benefits of Education.

One of the most serious weaknesses of manpower assessment is that it has no means of measuring the relative benefit of different skills to the economy. Common sense would suggest that highly qualified persons should be valued higher than unqualified persons. But what if the incidence of unemployment is most high amongst educated persons? Fortunately, that problem does not concern us as excess demand for labour at every skill level exists in our countries. But we still need some way of valuing different types of graduates of schools and training institutions. Ignorance of, or disregard for, the cost of different types of graduates is less serious than it would be in poorer developing countries. In 1975, Kuwait only spent 45% of her total state revenue.²⁹ As a result, financial capital is relatively cheap, and is not the same constraint as elsewhere. A more serious constraint is teacher time and educational resources, which are limited more by administrative inefficiency than a lack of funds.

Manpower assessments are also criticised on account of their disregard of the labour market³⁰ (I.L.O., 1975, p.8). Essential to a manpower assessment is a consideration not only of the demand for labour in the economy, but also the signals which the labour market

provides, and the way the market does, or does not, work. We should also want to include in a manpower assessment some indication of which skills seemed to be most highly in demand relatively, and presumably we would seek confirmation of current skill shortages by examining relative wage rates. If it is possible to estimate which excess demand for labour represents potentially the most serious handicap to economic development, then a manpower assessment becomes a more flexible tool, and consequently one of much greater practical value.

Summary:

The economic theory underlying a manpower assessment is less rigorous than that of rate-of-return analysis. The data requirements are more easily met, and the results it provides are not as definitive as those of a rate-of-return analysis. Two principal problems would arise if we were to use it in our study: the valuation of different educational outputs, and the estimation of future employment.

2.6. Conclusion.

Both the approaches we have discussed contain concepts which are helpful to assessing the disposition of educational resources. An analysis of social rates-of-return to different levels of education would give a picture of relative benefits to society of its investment in human resources, and provide an indication of the most fruitful area for further investment. Not only could the relative benefit of different educational investments be compared, but the education sector as a whole could be compared with public health expenditure.

Similarly, a manpower assessment would provide a basis on which to evaluate the present direction of investment in human resources. The ideal would be a combination of the two: what a social rate-of-return analysis lacks in setting numerical expansion or contraction of education, a manpower assessment could supply; what a manpower assessment lacks in measuring the relative benefits of different outputs, social rate-of-return analysis would supply.

From our survey of the two approaches, it appears that the theoretical demands and the data requirements of social rate-of-return analysis render it almost unusable for our study. A manpower assessment is a more practical alternative, as its data requirements and theoretical assumptions are less rigorous. However, it does not represent a completely satisfactory way of examining the allocation of educational resources, since, as we have said, by itself it has no means of valuing different educational outputs, and it involves several steps which lead to results that can only be described as best estimates. This would, though, have been even more the case for rate-of-return analysis.

If we can find a way of valuing educational output, and can accept that our estimates of additional employment are indications, rather than

exact predictions, then a manpower assessment would be a worthwhile exercise. We can obtain an idea of the value of different graduates to the economy in two ways.

First, an analysis of current economic development and the structure of the labour market would reveal which skills are in demand, and which will become in greater demand in the future. Second, a study of the educational systems and training institutions, together with government statements about education would reveal the relative priorities which the government perceives.

To study the disposition of educational resources in our three countries, we need to consider the following three areas: recent economic development, the labour market and the educational and training system. In addition we should briefly establish those demographic features of each country which are relevant to our enquiry. Knowledge of these (four) topics is necessary for two reasons. First, to construct a useful and reliable "manpower assessment" we require a considerable body of information, including aspects of each of the topics listed. Second, in order to interpret the results of our manpower assessment intelligently, we require some knowledge of the relationships which affect investment in human resources, such as that of the labour market and the educational system, or population growth and the demand for education.

Our requirement of data is formidable, and as little work has been done in any of these areas, much time is involved assembling the requisite information. As a result, our study concentrates on Kuwait and a manpower assessment is made only for this economy. However, there are sufficient data and comparative information to facilitate a similar discussion of the development of human resources undertaken for Kuwait for the other two countries, although in less depth.

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All exchange rates are taken from: International Monetary Fund, Financial Statistics, 1975, Vol.29, No.1, "Kuwait", p.236.
As no figures are available for Kuwait's domestic rate of inflation, Iran's imported goods price index was used. Iran is geographically close to Kuwait, and Kuwait relies almost entirely on imported items. There is very little difference between the level of inflation measured by "imported items" or "consumer prices" in this region between 1971 and 1974.
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CHAPTER 3.DEMOGRAPHIC DEVELOPMENT.Preface

Besides the reserves of oil and natural gas in the three countries in our study, their greatest resource is their people. In this Chapter, demographic features of the populations in our study relevant to our enquiry are examined.

PART I.KUWAIT.3.1. Introduction.

Kuwait's population includes a majority of expatriate citizens. The demographic characteristics of the two groups are completely different; Kuwaitis are distributed by age and sex in a way that is consistent with any population experiencing a high rate of natural increase; non-Kuwaitis tend to be single men of working age.

There are a variety of factors which have combined to produce a very high rate of natural increase amongst Kuwaitis, none of which are likely to diminish in the near future. However, non-Kuwaiti migration to Kuwait has been so rapid that their share has continued to grow since the first Census was taken in 1957. Recently, a trend amongst non-Kuwaitis, of single men giving way to family situations, has been discernible. This trend has serious implications for Kuwait's future economic development, and for the educational sector.

3.2. Demographic Features of Kuwait, 1907-1965.

Since the start of this century Kuwait's population has grown steadily from a reported total of 35,000 in 1907¹, to around 60,000² in the 1930's, an annual growth rate of roughly 2.7%. Following the discovery of oil in 1935, the population rose rapidly to an estimated 100,000 in 1945.³ Much of this increase was the consequence of migration into Kuwait of those living in surrounding regions. These immigrants have continued to flow to Kuwait in large numbers up to the present day. The first Census was held in Kuwait in 1957, and subsequent ones have been taken in 1961, 1965 and 1970. The most recent was conducted in April of 1975. The results of each Census are shown in Table 3.1.

TABLE 3.1. POPULATION OF KUWAIT BY CENSUS YEAR, NATIONALITY, 1957 - 1975.

<u>Census Date</u>	<u>Kuwaitis</u>	<u>% Annual Rate of Growth</u>	<u>Non-Kuwaitis</u>	<u>% Annual Rate of Growth</u>	<u>Kuwaiti share of Total</u>	<u>Total</u>
1957	113,622	9	92,851	13	55	206,473
1961	161,909	8	159,712	11	50	321,621
1965	220,059	9.6	247,280	9.6	53	467,339
1970	347,393	6.2	391,190	6.0	47	738,588
1975	468,754		521,629		47	990,383

Source: Planning Board, Census 1957, 1961, 1965, 1970 and Preliminary Results, 1975, Kuwait.

Table 3.1 shows rates of increase of population for Kuwaitis and non-Kuwaitis which are much greater than natural increase alone would permit. Kuwaiti non-natural increase has been caused by the enumeration of Bedouin tribesmen, living a nomadic existence within Kuwait's borders. Non-Kuwaiti increase is due largely to net migration into Kuwait.

The share which Kuwaitis absorb of the total population fell from 55% in 1957 to 47% in 1970, and has been constant ever since. As long as the high level of non-Kuwaiti migration continues, their share relative to Kuwaitis must increase.

The total population has now almost reached one million persons, a remarkable increase from 200,000 persons in 1957. To understand the demographic features of Kuwait's population better, we should examine the Census of 1975 more closely. Unfortunately, only the preliminary results of that census have been released, and we are obliged to concentrate our analysis on the censuses of 1970 and 1965. Close inspection of the Kuwaiti and Non-Kuwaiti communities reveals that they have very different demographic characteristics. We will deal with each separately.

3.3. Kuwaitis.

The Kuwaiti population is an extremely young one. If we use as a measure of "youthfulness" or "agedness" the ratio of those aged "5-14" to those aged "15-64", Kuwait appears to have a very "youthful" population; as Table 3.2 shows Kuwait has the highest ratio of all the countries listed by the United Nations in 1965. However, both Qatar and Bahrain have still more "youthful" populations, as we will see later, and this may be typical of small and highly urbanised Gulf States some years after oil revenues have been received.

TABLE 3.2. RANKING OF COUNTRIES BY RATIO OF PERSONS AGED
"5-14" TO PERSONS AGED "15-64".

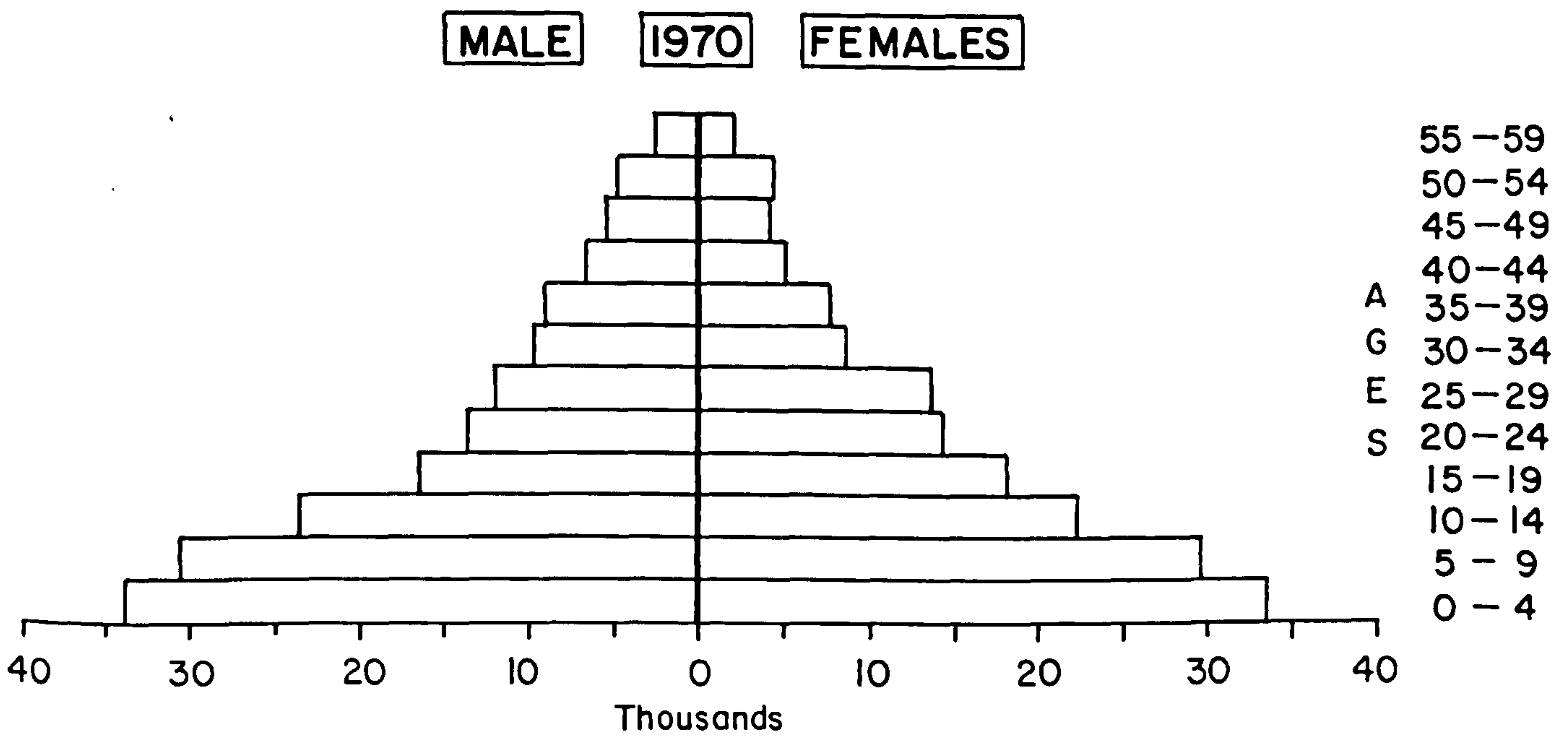
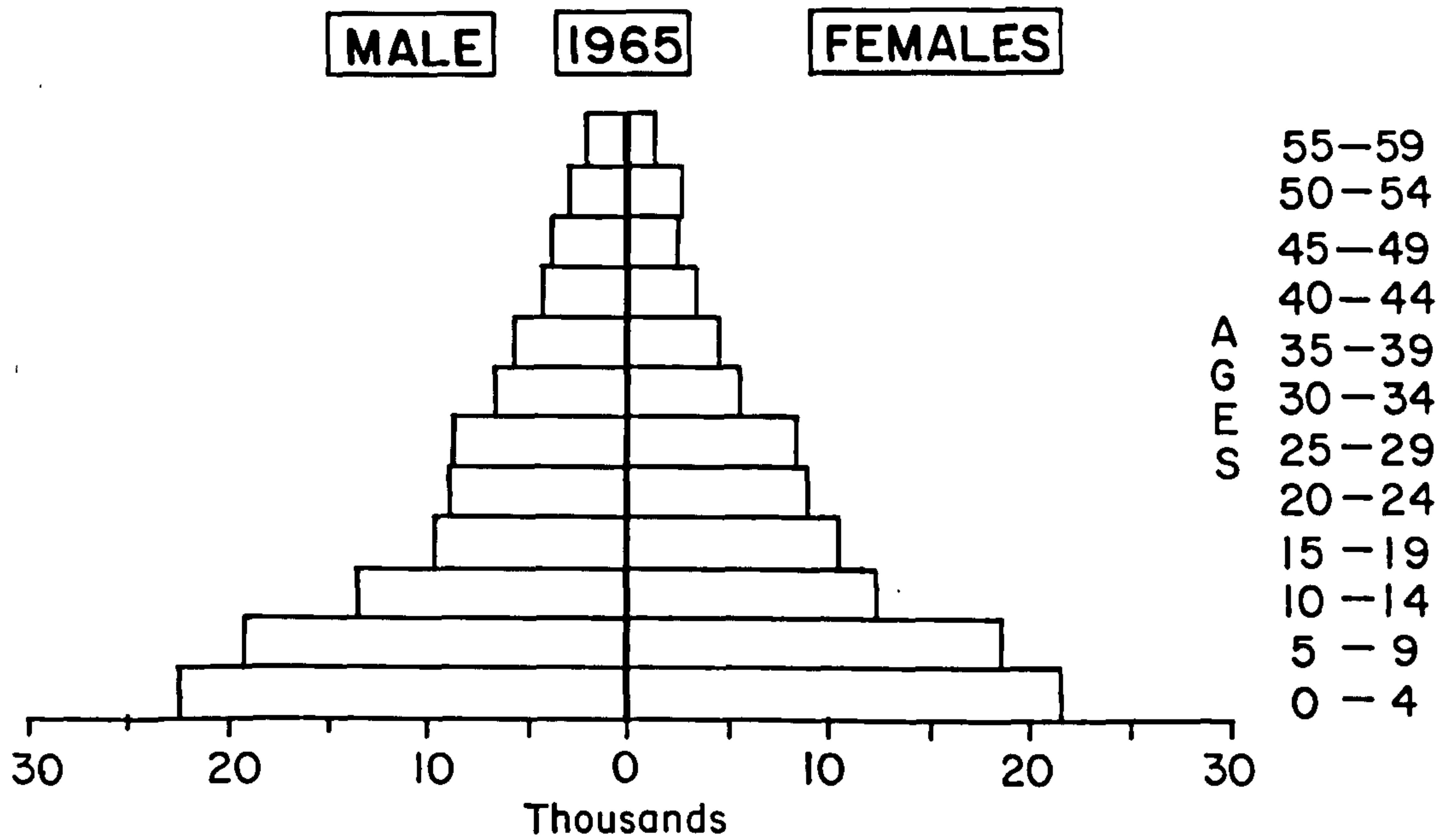
<u>Country</u>	<u>Year</u>	<u>Ratio of 5-14/15-64</u>
Kuwait	1970	.66
Nicaragua	1963	.61
India	1961	.46
Fed. Rep. of Germany	1961	.21

Source: United Nations, Demographic Yearbook, New York, 1965.
Planning Board, 1970 Census, Kuwait, 1970.

On Figure 3.1, the expanding base of the population pyramid in both 1965 and 1970 provides visual evidence of this point. The Kuwaiti population is so young as a result of two factors: (a) a falling child mortality rate consequent upon the improved health facilities in Kuwait since 1950, and (b) a very high average family size and a very high crude birth rate. This point is dealt with more fully at a later stage. One consequence of Kuwait's population explosion is a very rapid increase in the demand for school places which has placed a great strain on the Ministry of Education's teaching resources. To be able to assess the future demand for school places more exactly, we should consider more precisely fertility and mortality in Kuwait.

(a) Mortality: Over 1965 to 1970, the reported crude death rate⁴ for Kuwaitis decreased from 7.3 to 5.8 deaths per thousand persons.⁵ It seems extremely unlikely that these figures are accurate, though they are widely quoted as being so.⁶ There are several reasons for thinking

Fig.3|AGE SEX POPULATION PYRAMID OF KUWAITIS IN 1965 & 1970



that these figures are not accurate, and these are as follows:

- i) a crude death rate relates the number of deaths to the total population. It is very rare in developing countries to find deaths reported reliably. Kuwait may be an exception to this, but Hill's⁷ conclusions would not support this view. It seems probable that the number of deaths actually recorded is less than the total. There is also some doubt over the accuracy of the 1970 Census figures for total population. In particular, it is believed that undercounting took place in the age range "0-4". A brief inspection of Figure 3.1 should support this view, and it will be fully dealt with in the Appendix. Since the accuracy of the figures for the number of deaths recorded and the total population is in doubt, the official crude death rates may well be incorrect.
- ii) A crude death rate of 5.8 deaths/1000 appears exceptionally low when compared with the rates found in other developing Middle Eastern or oil rich countries, as Table 3.3 shows. Moreover, very low crude death rates of this order are only experienced for brief periods before rising to higher levels.

TABLE 3.3. CRUDE DEATH RATES IN SELECTED COUNTRIES.

<u>Country</u>	<u>Year</u>	<u>Crude Death Rate</u> (Number of deaths per 1,000 population).
Madagascar	1963	15.8
Mauritius	1963	9.6
Venezuela	1963	7.2
Egypt	1960	16.8
Algeria	1964	14.1

Source: United Nations, Demographic Yearbook, 1967, Table 2, p.98, New York

- iii) While the health facilities in Kuwait are of the highest standard, 62.6%⁸ of all adult Kuwaiti women are illiterate, and particularly those women of child bearing age. As a result, the infant mortality rate is probably higher than the lavish health facilities would suggest, considered by themselves.

iv) There is still a mild prevalence of tuberculosis and certain other diseases which serve to increase the crude death rate.⁹

Even though Kuwait has a very "young" population, it is unlikely that her population experiences a death rate as low as 5.8. European countries experience crude death rates between 10.1 (Denmark) and 13.5 (W. Germany)¹⁰, and it seems more likely that Kuwait has a death rate nearer European levels. If the published mortality statistics are not accepted as accurate, an alternative rate that is chosen will always be open to question. In this paper, it is argued that a more accurate picture of mortality is obtained if all the reported age specific death rates are doubled. This produces a crude death rate of 11.6 per thousand, which is a rate similar to that found in many European countries.

b) Life Expectancy:

The corrected age-specific mortality rates for Kuwait provide information which can be used with United Nations "life tables" to estimate life expectancy. In the Appendix, the method of estimation is shown and the life expectancy for Kuwaiti men and women calculated. The advantage of using the United Nations Life Tables is that minor irregularities of reporting of deaths can be ignored; where the data is particularly unreliable (as in the case of the "0-4" age cohort), projections can be made. The life expectancy of Kuwaiti boys and girls at birth in 1973 was 63.2 years and 65.8 years respectively, as Table 3.4 shows. The average life expectancy of women is usually higher than for men, and the results shown here confirm this. The life expectancy of the Kuwaiti population at birth improved significantly between 1935 and 1945 as Table 3.4 shows. It was about this time that oil was discovered, and by 1950, was being produced. It is evident that one effect of an endowment of oil may be to increase life expectancy.

TABLE 3.4. LIFE EXPECTANCY AT BIRTH BY AGE, FOR KUWAITIS.

<u>Age</u>	<u>Life Expectancy at Birth in Years in 1970.</u>	
	<u>Kuwaiti Men</u>	<u>Kuwaiti Women</u>
0-4	63.2	65.8
5-9	63.2	65.8
10-14	63.2	65.8
15-19	63.2	65.8
20-24	63.2	65.8
25-29	63.2	65.8
30-34	63.2	63.2
35-39	60.4	56.5
40-44	57.6	56.5
45-49	52.5	56.5
50-54	48.0	56.5
55-59	42.0	56.5
60-64	42.0	56.5
65-69	42.0	56.5
70-74	42.0	51.5
75+	42.0	47.5

Sources: Calculated by taking the estimated "levels" shown on Table and converting them into life expectancy using United Nations Population Studies, No.25, Methods for Population Projections by Sex and Age, Table V, New York, 1956.

c) Birth Rate:

Unlike the statistics published on deaths in Kuwait the figure for births is thought to be fairly complete. This is so because there is a strong incentive for parents to register the birth of a child, as allowances are paid to Kuwaiti parents for each child. Also, as hospitals are the primary source of information on births, their records are likely to be consistent, if slightly inaccurate in absolute terms. The published figures do show significant fluctuations from one year to the next, and if we intend to estimate future school enrolment, a birth rate will have to be chosen. There are three different ways we can estimate the birth rate in Kuwait. Official statistics show the rate fluctuating from 54.5/1,000 persons in 1965 to 46.4/1,000 persons in 1970, as Table 3.5 shows. The two most reliable figures in this series are those for 1965 and 1970 since population was known most accurately in those years. The figure for those years suggests that the rate is in the order of $50 \pm 10\%$. However, the 1965 and 1970 Census figures are thought to be inaccurate, and there may also have been some undercounting of births.

TABLE 3.5. CRUDE BIRTH RATES FOR KUWAITIS, 1965-1972.

<u>Year</u>	<u>Crude Birth Rate</u>	<u>Men</u>	<u>Women</u>
1965	52.7	27.2	25.5
1966	51.0	26.1	24.9
1967	54.5	27.2	27.3
1968	53.6	27.2	26.6
1969	44.8	27.8	28.0
1970	46.4	23.5	22.9
1971	48.3	24.4	23.9
1972	50.5	25.8	24.7

Source: Planning Board, Statistical Abstract, 1974, Kuwait, Table 26B, p.52.

In the Appendices of this Part, the data for 1970 are inspected, and their supposed inaccuracies corrected. Table 3.17 shows the corrected 1970 Census. We are able to estimate the 1970 crude birth rate by taking the reported number of births in the second half of 1969 and the first half of 1970 as the number of births, and by using the corrected total population figure in Appendix I for our total population. By this method the crude birth rate is found to be 45/1,000 - 22.7 for men, and 22.3 for women. By this approach we have an accurate figure for total population, but a possibly low figure for births.

In the Appendix, Table 3.17 shows the Kuwaiti population in 1970 corrected for undercounting by age cohort. Rather than rely on reported births, it is possible to separate the "0-4" age cohort into yearly totals. The "0-1" age group clearly represents those born in the previous year. The division of the "0-4" age cohort into yearly groups is accomplished with greater accuracy if "Sprague multipliers" are used.¹¹ Use of these multipliers ensures that the distribution of each yearly group is consistent with the distribution of the population. This technique is accepted United Nations practice for the distribution of one single age cohort into yearly groups.

When this is done the male crude birth rate is found to be 22.7/1,000 and the female crude rate is 22.3/1,000. The reported figures on Table 3.5 also show a slight differential between the birth rate for boys and for girls, but an overall higher level in each case. A figure of 25 male births per thousand population and 24 female births per thousand population will be adopted for projecting population, and it is thought these rates are very close to the actual rate.

d) Educational Attainment:

Formal schooling began in 1953 in Kuwait, but it was not until 1952 that education was made universally available at the primary level. Since that time very considerable sums have been devoted to providing educational facilities, and in 1966 the University of Kuwait enrolled its first students. In Kuwaiti society, as in almost all Arab societies, boys are given precedence over girls in educational opportunity. Table 3.6 shows that in 1965, 69% of all Kuwaiti women more than seven years old were illiterate, and most of these are more than twenty years old. The continuing educational effort tends to involve those of school age, rather than adults, and so between 1965 and 1970 the share of women illiterates fell to 63%, only a 6% fall, representing 6,745 persons in absolute terms. There is however a significant overall improvement, and this has an implication for the birth rate. In Kuwait there is a fairly close relationship between educational attainment of women and family size, as Table 3.7 shows. At the moment, virtually all Kuwaiti girls go to school, and a large majority reach the secondary level. As the educational attainment of women improves, the average family size should fall from its current level of 4.4 children per family to less than half that figure.

Kuwaiti men are rather better educated than their female counterparts, and over the period in question experienced a greater improvement in

educational attainment than did the women. This is the consequence of the priority given in the adult illiteracy programs to men.

TABLE 3.6. THE DISTRIBUTION OF EDUCATIONAL ATTAINMENT OF KUWAITIS
AGED 10 YEARS OR MORE IN 1965 & 1970 (BY SEX).

	<u>1965</u> <u>K.M.</u>	<u>1970</u> <u>K.M.</u>	<u>1965</u> <u>K.W.</u>	<u>1970</u> <u>K.W.</u>
Illiterate	39	32	69	63
Literate	41	28	20	13
Primary	10	23	7	15
Intermediate	6	11	3	7
Secondary	2	5	1	2
University	2	1	-	-
Total Number	70,859	11,0734	67,169	108,107

Source: Planning Board, Census 1965, Table 4A, p.26 (Arabic)
Planning Board, Census 1970, Table 7, p.16 (Arabic).

TABLE 3.7. EDUCATIONAL ATTAINMENT AND FAMILY SIZE OF KUWAITI
WOMEN IN 1970.

<u>Educational Level</u>	<u>No. of Women</u>	<u>No. of Live Births Per Family</u>
Illiterate	45,184	6.5
Read and write	5,901	4.8
Certificate below Secondary	3,147	2.6
Secondary or University		
Graduate	862	1.8
All Women	55,094	4.4

Source: Planning Board, Census 1970, Kuwait (Arabic).

3.4 . Non-Kuwaitis

From what we said earlier, it is clear that the term "Non-Kuwaiti" is used to describe that part of the community which does not have Kuwaiti citizenship. Most "Non-Kuwaitis" are of Arab origin, and have migrated to Kuwait as a result of the employment opportunities to be found there. Kuwait was one of the first small Sheikhdoms in the Arabian Gulf to develop her oil resources, but now shares a similar economic position with other Gulf States such as Qatar and the Emirates. Migration to the Arabian Gulf from other parts of the Middle East is no longer directed exclusively to Kuwait, and there is now much more of a

Gulf "labour market" than there was a decade ago.

An additional reason for the very large number of "non-Kuwaitis" in Kuwait is the fact that Kuwait has been sympathetic to the Palestinian cause. After 1967 Kuwait accepted many refugees from the West Bank of the Jordan and other parts of the Middle East.

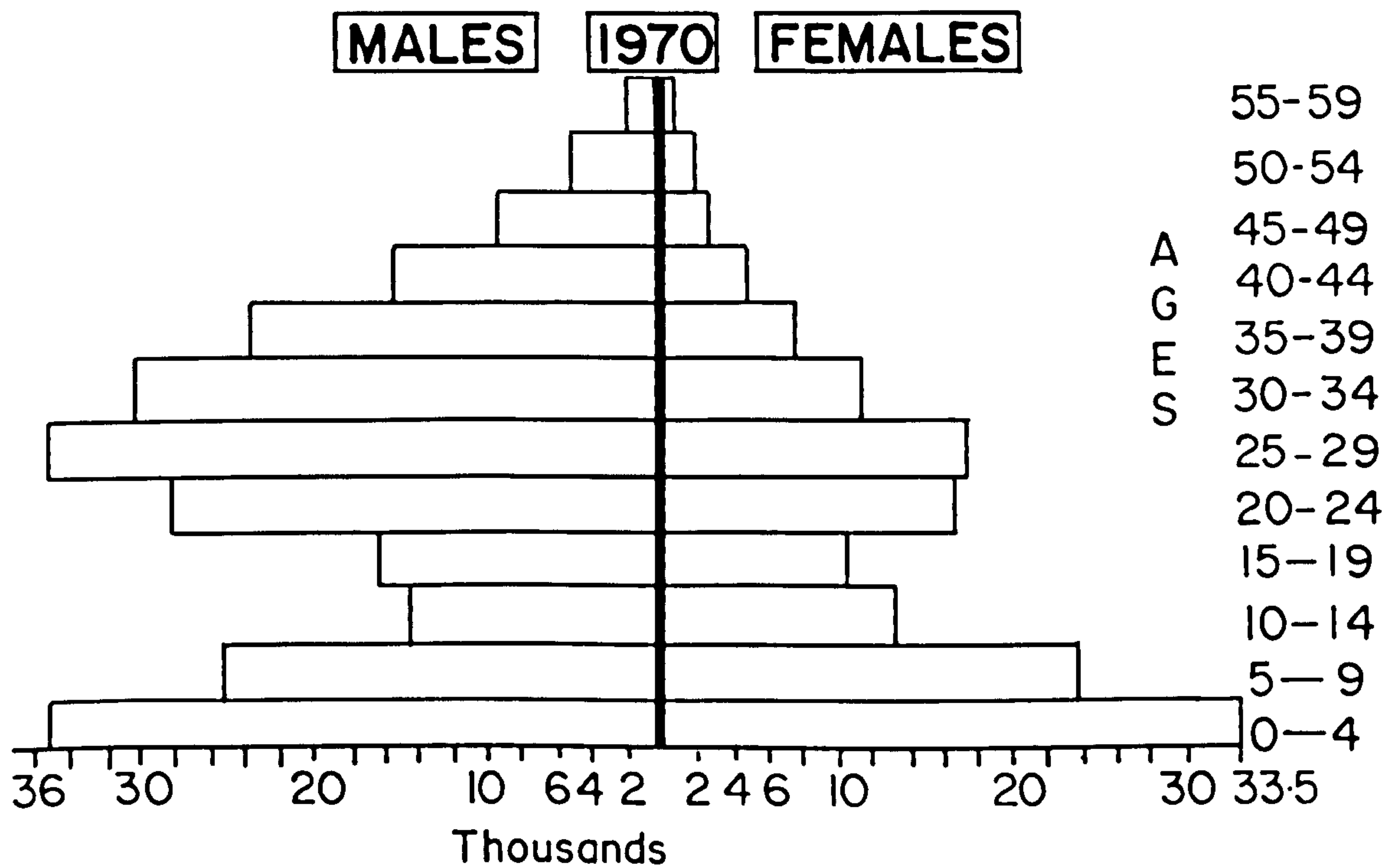
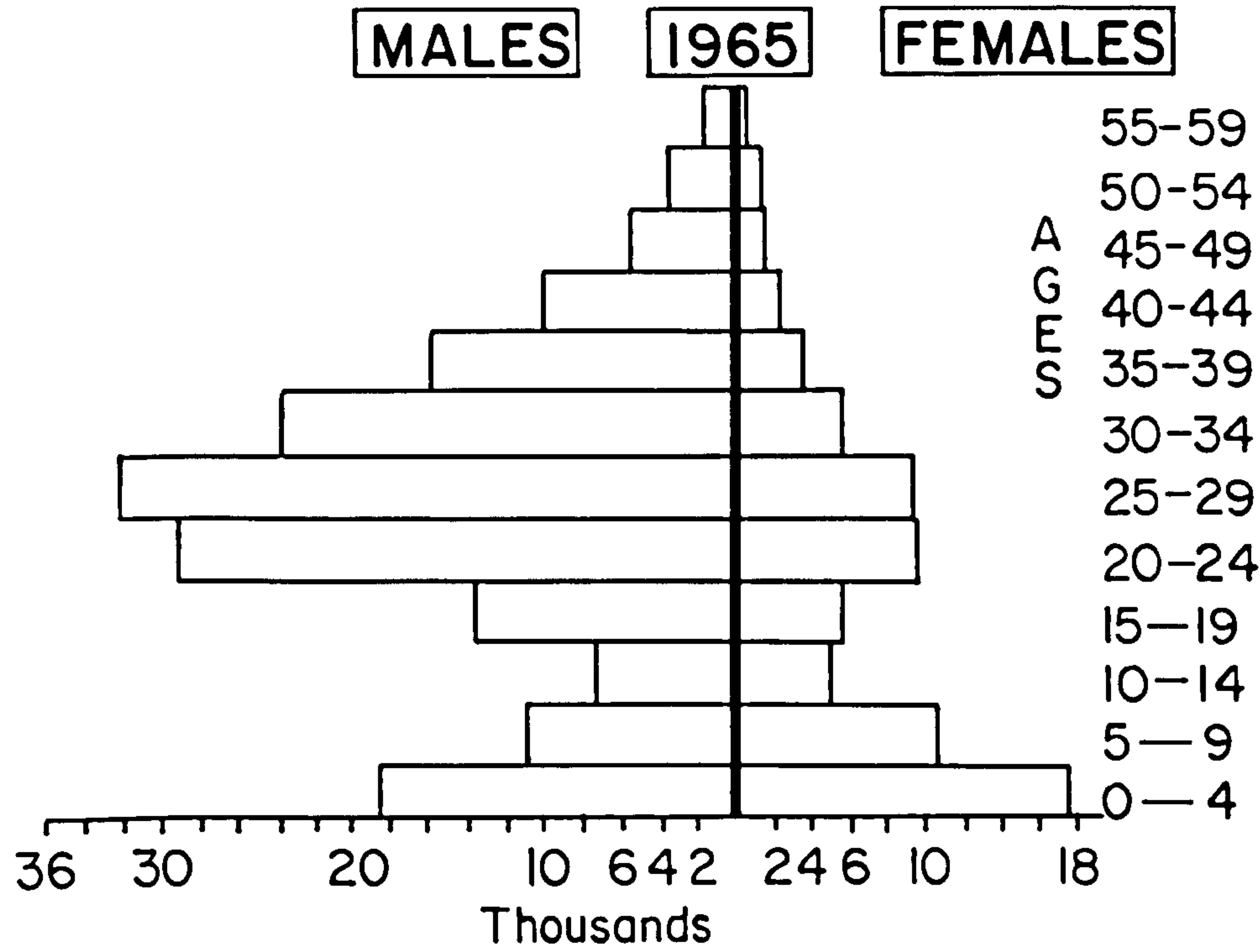
The blanket term "non-Kuwaiti" covers not only a mixture of twenty different nationalities, but also an immense variety of skill levels ranging from professional accountants to dock labourers. To a certain extent, particular nationalities specialise in particular skill levels: the Lebanese and the Egyptians are often found in Professional Occupations; Iranians are usually involved in manual tasks.

The status of non-Kuwaitis is an extremely sensitive issue in Kuwaiti society. A very clear distinction is made between those who are regarded as Kuwaitis, and those who are not. The conditions which must be met to obtain Kuwaiti citizenship are exceptionally stringent; they are:- twenty years continuous residence in Kuwait, profession of the Islamic faith and a fluent knowledge of Arabic. There are additional stipulations, and all these combined with the very high level sanction required for the awarding of citizenship has meant that in recent years very few non-Kuwaitis have become Kuwaitis. In 1973/74 four non-Kuwaiti males were awarded citizenship.¹² Recently there has been considerable pressure to award citizenship to selected groups of non-Kuwaitis, such as doctors, engineers and teachers. At present, no official encouragement has been given to this idea, and in any event it seems unlikely that large numbers of expatriates would ever be granted citizenship.

The non-Kuwaiti community is, as has been noted, a conglomerate of several international communities. The age distribution is extremely uneven and evidences a considerable employment orientation.

Fig.3.2 illustrates the distribution of non-Kuwaitis by age for 1965 and 1970, and it is clear that an unusually large proportion

Fig.3.2 AGE -SEX POPULATION PYRAMID OF NON KUWAITIS IN 1965 AND 1970.



Source: 1965 Census, Kuwait Table 23, P.204 (Arabic)
1970 Census, Kuwait Table 42, P.347 (Arabic)

of all non-Kuwaitis are of working age. The share in the total non-Kuwaiti community of persons aged "15-60" fell from 70.3% in 1965 to 61.4% in 1970, as Table 3.8 shows. Over the period the non-Kuwaiti community became distributed in a more usual way.

TABLE 3.8. THE SHARE OF PERSONS AGED 15-60 IN THE KUWAITI AND NON-KUWAITI POPULATION OF THE RESPECTIVE TOTAL POPULATION.

<u>Year.</u>	<u>Kuwaitis</u>	<u>Non-Kuwaitis</u>
1965	46.1	70.3
1970	45.5	61.4

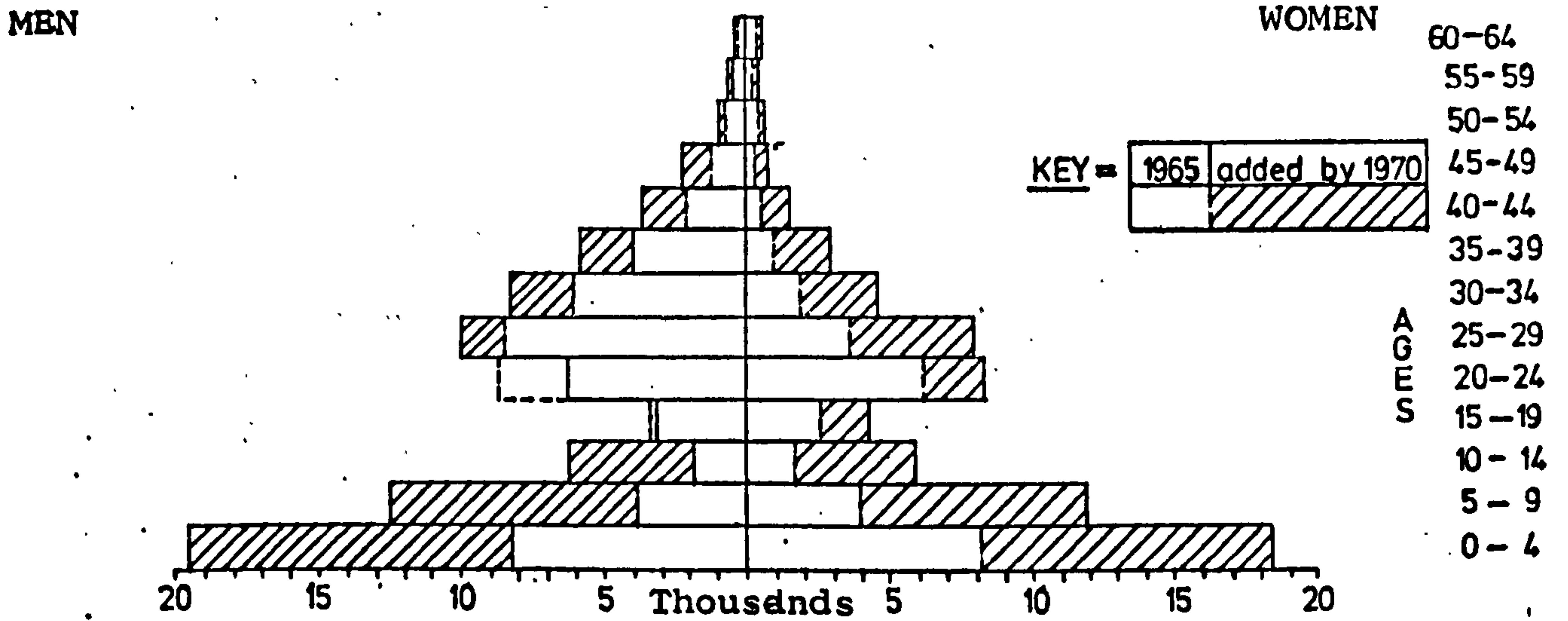
Source: Planning Board, 1965 Census, Kuwait, Table 23, p.204.
 Planning Board, 1970 Census, Kuwait, Table 42, p.347 (Arabic).

The non-Kuwaiti community is composed of a large group of Arab origin, a sizeable Persian and Asian group and a small African and European group, Table 3.9 shows the individual groups by size, and that the Palestinian/Jordanian community is by far the largest, with a share of the total in 1970 of 38%. The next largest group is the Persian one with a 10% share in 1970. These figures, taken from the 1965 and 1970 Census, are thought to be inaccurate and should be regarded more as an indication of the actual position rather than as a precise statement of it.¹³ When the age distribution of particular nationalities is examined, considerable variation between each non-Kuwaiti group emerges. Our main concern here is with the non-Kuwaiti Arab communities, since they represent three quarters of the total non-Kuwaiti community, and are more integrated in the life of Kuwait than the other groups. Their periods of stay tend to be longer and many of their children are educated in government schools.

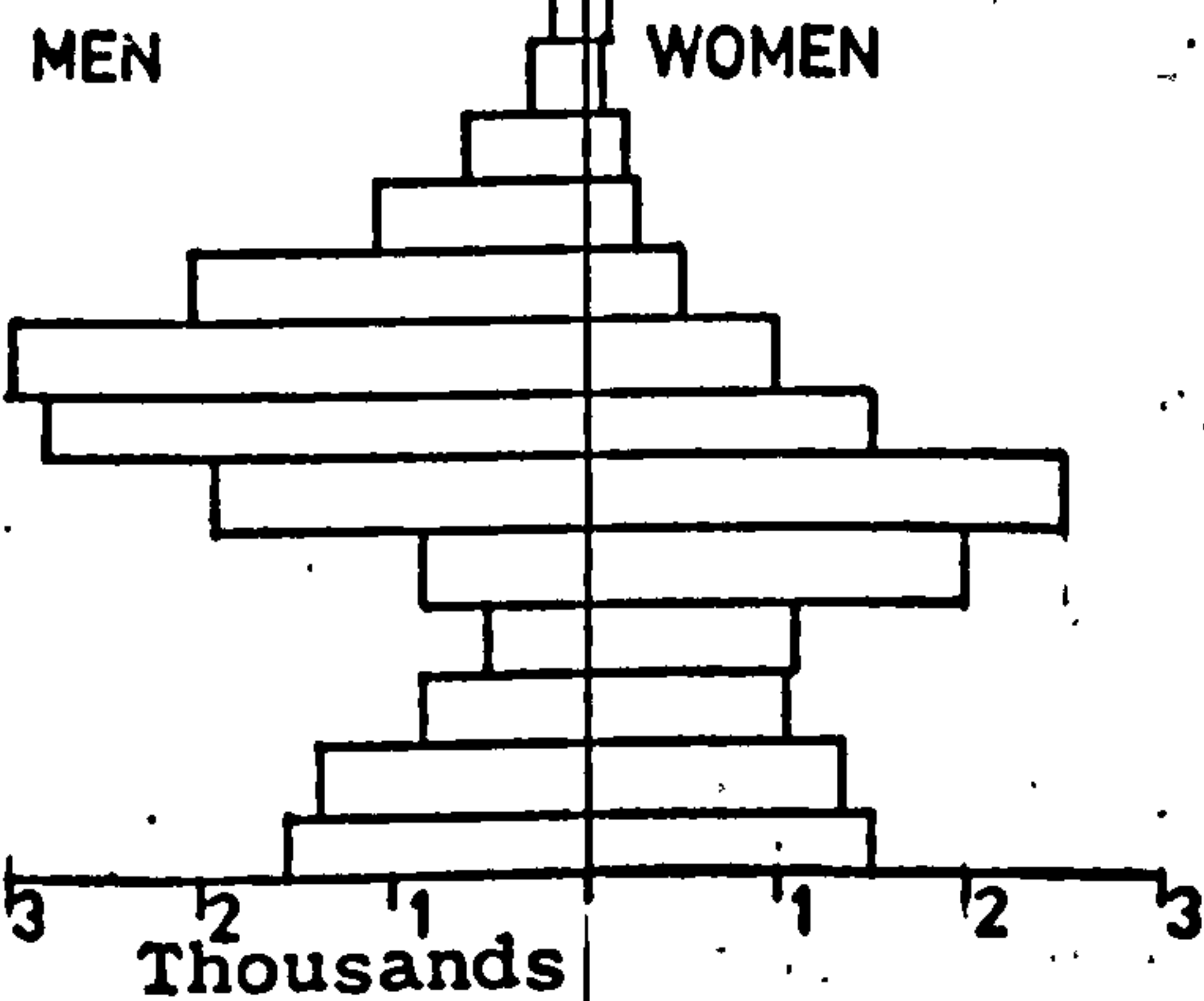
The age/sex distribution of individual nationalities, illustrated on Figure 3.3 shows that there are relatively few of the young and the aged, and relatively few women. In other words, there is a general absence of families in non-Kuwaiti communities. There are several disincentives to a migrant worker who wishes to bring a family to Kuwait.

FIGURE 3.3.
AGE-SEX POPULATION PYRAMID FOR SELECTED
EXPATRIATE GROUPS IN KUWAIT IN 1970.

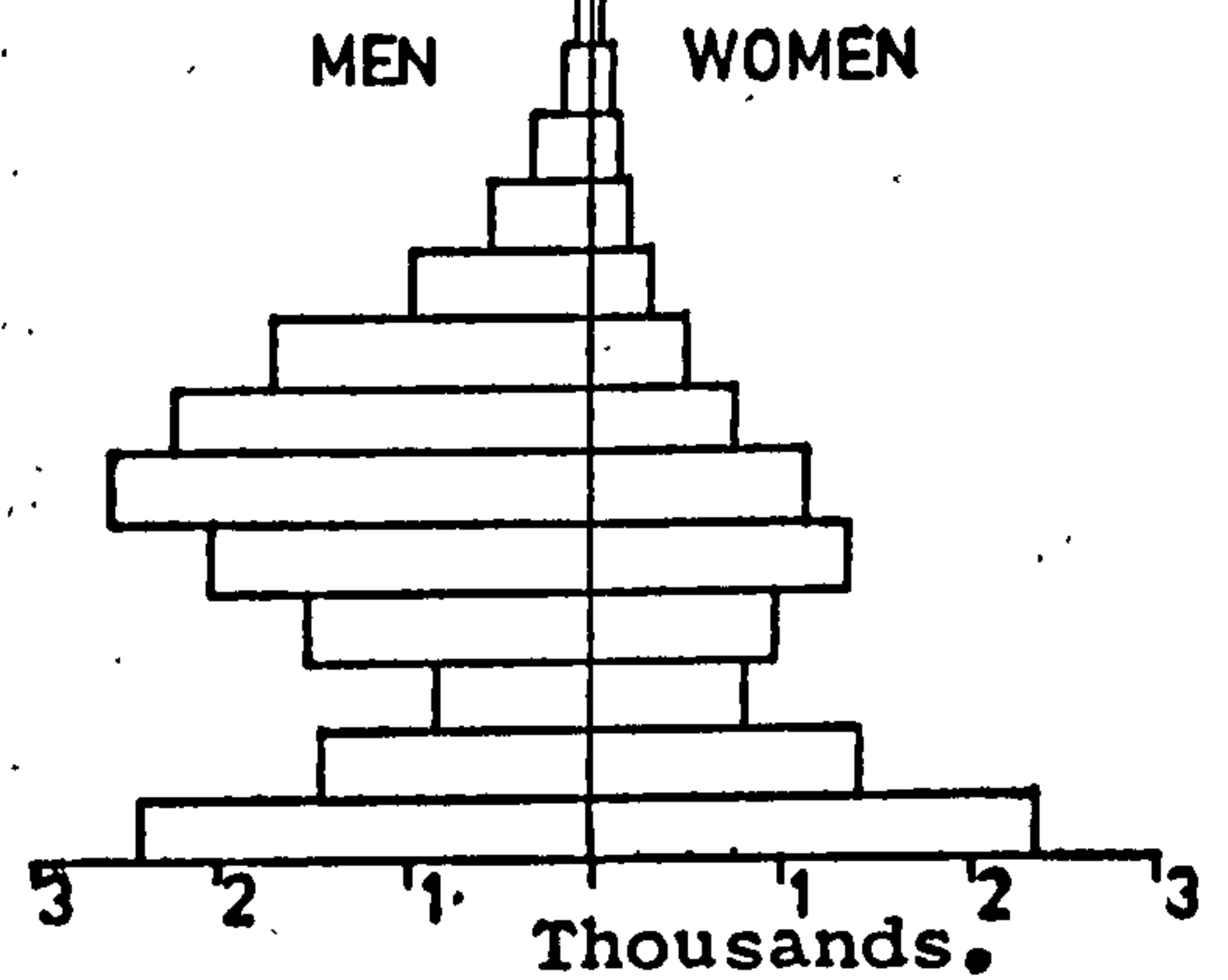
Palestinians and Jordanians,



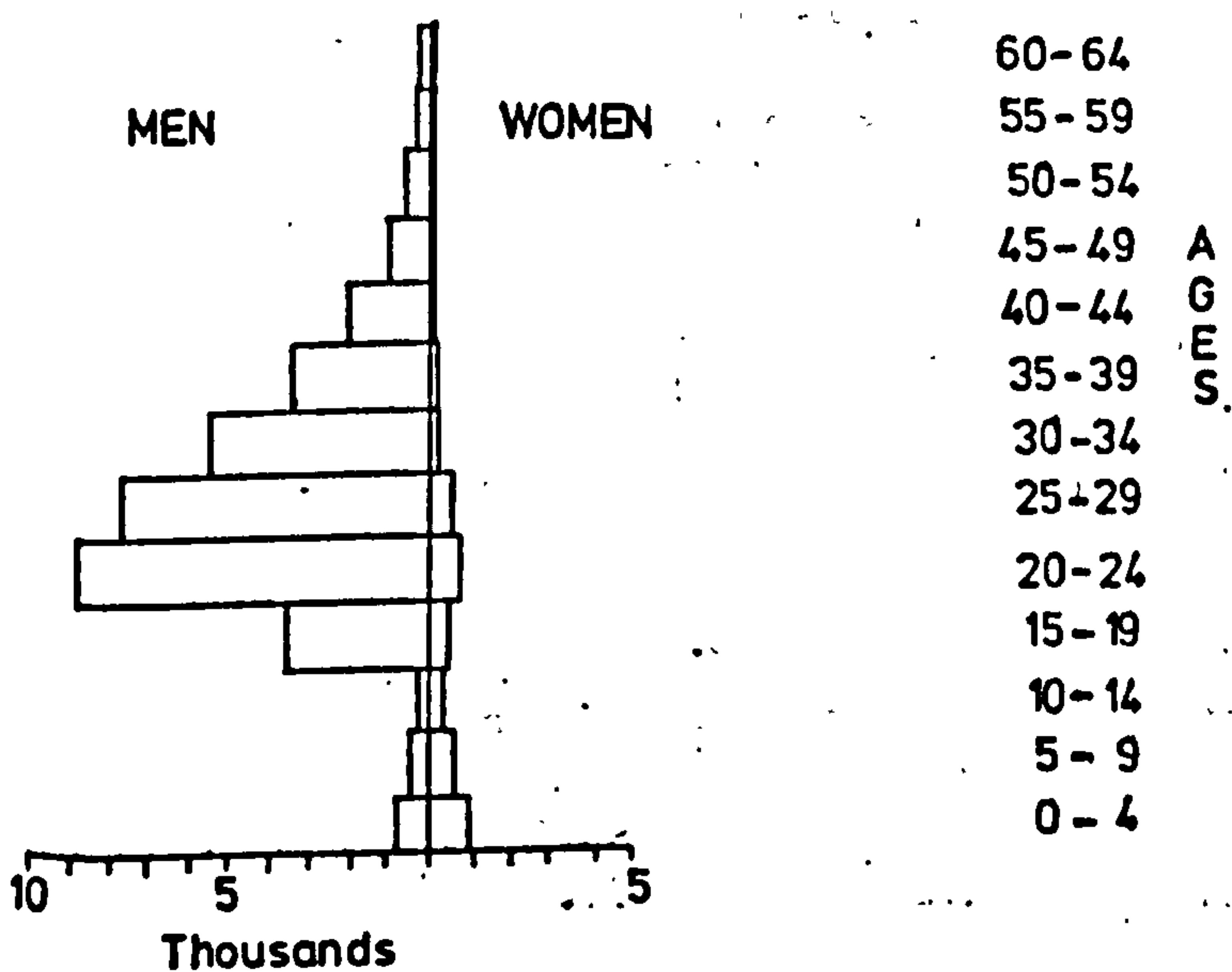
Egyptians



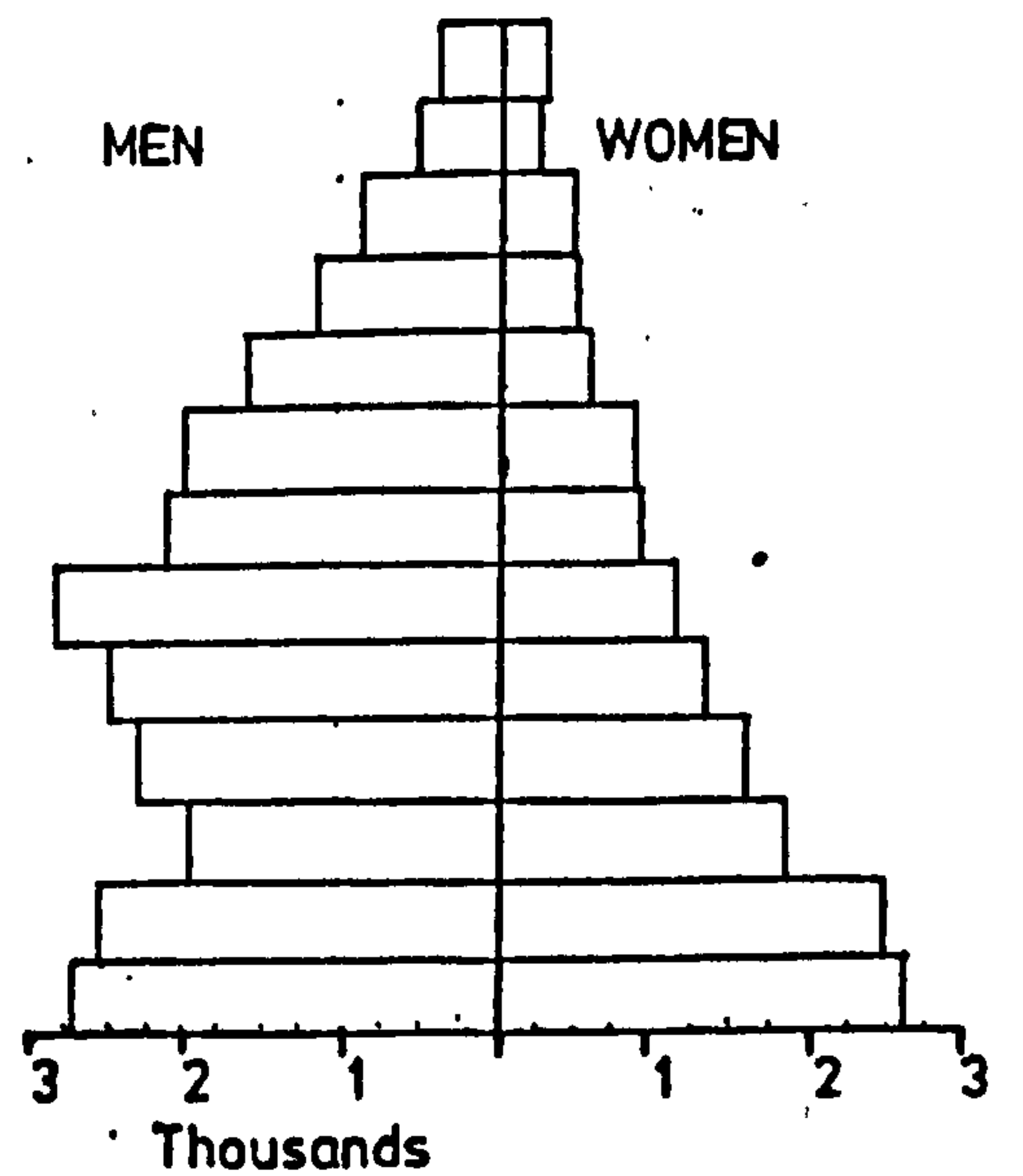
Syrians



Iranians



Iraqis



Source: 1970 Census, Kuwait, Table 3, p.4. (Arabic).

TABLE 3.9. THE NON-KUWAITI COMMUNITY IN 1965 AND 1970,
BY NATIONALITY, NUMBER AND RELATIVE SIZE.

<u>Country of Origin</u>	<u>1965.</u>		<u>1970.</u>	
	<u>No.</u>	<u>%</u>	<u>No.</u>	<u>%</u>
Jordanian/Palestinian	77,712	27	147,696	38
Iraq	25,879	9	39,066	10
Syria	16,892	6	27,217	7
Lebanon	20,877	7	25,387	6
Egypt	11,021	4	30,421	8
Oman	19,520	7	14,670	4
Saudi Arabia	4,632	2	10,897	3
Sudan	418	-	773	-
Bahrain	747	-	966	-
Yemen (N&S)	2,635	1	8,604	2
Other Arab Nations	6,236	2	6,915	2
Iran	30,790	11	39,129	10
India	11,699	4	17,336	4
Pakistan	11,735	4	14,712	4
Africa	412	1	674	-
Europeans	4,305	1	3,552	1
Total, All Nationalities	286,312	100	391,266	100

Source: Planning Board, 1965 Census, Kuwait, Table 23, p.204 (Arabic).
Planning Board, 1970 Census, Kuwait, Table 42, p.347 (Arabic).

Apart from the official limitation on entry into the country, Kuwait has a very high cost of living, and there is only limited educational opportunity for the children of expatriates. The proportion of those in government schools to those of school age varies from 51% for Egyptian boys to 22% for Syrian boys and Iraqi girls, as Table 3.10 shows. However, the absolute numbers represented by these shares are a very small fraction of the 1970 total school population of 129,045.¹⁴

TABLE 3.10. THE PERCENTAGE AND NUMBERS OF NON-KUWAITI CHILDREN IN KUWAIT OF SCHOOLING AGE ACTUALLY IN SCHOOL, BY NATIONALITY, IN 1970.

<u>Nationality</u>	<u>BOYS</u>		<u>GIRLS</u>	
	<u>No.</u>	<u>% in School</u>	<u>No.</u>	<u>% in School</u>
Palestinian & Jordanian	7210	33	6197	29
Iraqi	1818	29	1251	22
Syrian	792	22	720	24
Egyptian	1400	51	1338	40

Note: Ministry of Education publications provided information relating to the number of children by Nationality in school, and the 1970 Census provided information on those children of schooling age.

Source: Ministry of Education, Annual Yearbook, 1969/70, "General Statistics of the Nationality of Boys and Girls for the Academic Year 1969/70", p.144 (Arabic)
1970 Census, Table 3, p.4. (Arabic).

Fig.3.3 shows that some communities have a more distorted distribution by age and sex than others. The Iranian community is composed almost entirely of men of working age. The Egyptian and Syrian communities are more evenly balanced between sexes, but display an absence of school aged children. The Palestinian and Jordanian community is still more evenly distributed by age and sex, but also exhibits the same lack of school aged children. The Iraqi population distribution appears to be a relatively normal one, though with few women. However, the statistics relating to the Iraqi community are possibly the most suspect of all nationalities' statistics.¹⁵ Because of this, the Iraqi community will not be studied closely, and only one point noted, that there are relatively few women in this community.

We may usefully summarise the extent to which each community is either a normal population or a migrant male workforce, by considering the number of dependents per 100 men of working age (15-64). Dependents are defined as all women, and, all men less than 15 years of age, or more than 65 years of age. The Kuwaiti population dependency ratio was 100:322 in 1970. This compares with 100:17 for the Persian community and 100:256 for the Palestinian and Jordanian community. For most communities dependency ratios have not altered greatly since 1965, as Table 3.11 shows:

TABLE 3.11. DEPENDENCY RATIOS : THE NUMBER OF DEPENDENTS* PER 100 MEN OF WORKING AGE (15-64) IN KUWAIT IN 1965 AND 1970.

<u>Country of Origin:</u>	<u>1970:</u>	<u>1965:</u>
Palestine and Jordan	256	119
Iraq	82	140
Iran	17	10
Syria	120	72
Egypt	125	171
Kuwait	322	305

* Dependents are defined here as all women, boys less than 15 years and men over 65 years.

Source: 1965 Census, Table 23, p.204 (Arabic).
1970 Census, Table 42, p.347 (Arabic).

This means that the structure of the foreign communities has remained similar over the period. This point is borne out by the share that those aged "15-60" represented in 1965 and 1970 in the non-Kuwaiti communities, which, as Table 3.8 shows is 70.3% and 61.4% respectively. There has been, though, a general increase in the population balance and a movement towards a Kuwaiti population type of distribution. Close inspection of the dependency ratios shows that while there has been a slight change in most groups there has been a dramatic change in the Palestinian and Jordanian community. Their dependency ratio has moved from 119 dependents per 100 active males in 1965 to 256 dependents per 100 active males in 1970 - more than double. Moreover, this increase is from a large dependency ratio in 1965 in absolute terms. Since the Palestinian and Jordanian community represents so large a share of all expatriate groups, the developments in it affect the overall non-Kuwaiti position significantly. The increase in the dependency ratio of Palestinians and Jordanians largely accounts for the overall change in the share of the "15-60" between 1965 and 1970, which Table 3.8 shows.

As Fig.3.3 illustrates, the age distribution of the Palestinian community radically differs from that of other nationalities in the number of children less than ten years old. The number of children in these cohorts is much more consistent with that found in a normally distributed population. It is very significant that the increase in the share of those aged less than ten has occurred mainly since 1965, and in Fig.3.3 the Palestinian/Jordanian community 1970 position is drawn in continuous lines, while the 1965 position is shown in dotted lines. The post 1965 development in this community is two-fold. The number of adult women has increased to an approximate equivalence with the adult men. The number of children aged between "0-4" has increased two and a half times. One interpretation of this development is that the Palestinian/Jordanian community has, since 1965, become unlike any other expatriate community in that it appears to have settled permanently in Kuwait.

If this interpretation is correct, then there is a very serious implication for the educational systems of Kuwait. Table 3.10 shows that a large number of Palestinians and Jordanians were admitted to government schools in 1970, and many more than were admitted from other nationalities. It appears therefore, that consistent with her sympathetic concern for the Palestinian cause, Kuwait has accepted the responsibility for the education of many Palestinian and Jordanian children. If there are increasing numbers of these children, a considerable strain will be imposed on the teaching reserves of the educational system. Educational statistics for 1971/72 show that in the Primary stage, 13,952 children of Jordanian, Palestinian or "Stateless" parents were enrolled. This represents 22% of a total of 63,351 primary school children. If the enrolment ratios of 1970/71 for that group persist, then their share of the Primary stage, and inevitably of higher stages, will increase dramatically in future years.

Educational Attainment.

Non-Kuwaitis migrate to Kuwait to work in a wide variety of occupations and skill levels. While there are many who are very poorly educated, some are extremely well educated. The overall non-Kuwaiti position shown on Table 3.12 is that men are slightly less well educated in formal terms than non-Kuwaiti women. Educational attainment is a poor indication of skill level, since it contains no reference to the quality of education, or on-the-job experience. Comparison with Table 3.6 shows that non-Kuwaiti women are very much better educated than their Kuwaiti counterparts.

Both non-Kuwaiti men and women improved their overall educational attainment between 1965 and 1970, and one interpretation of this development may be that as the Kuwaiti population becomes better educated, the need for the less well educated non-Kuwaitis diminishes.

TABLE 3.12. DISTRIBUTION OF EDUCATIONAL ATTAINMENT OF
NON-KUWAITIS AGED TEN YEARS OR MORE IN 1965 & 1970.

	<u>MALE.</u>		<u>FEMALE.</u>	
	<u>1965(%)</u>	<u>1970(%)</u>	<u>1965(%)</u>	<u>1970(%)</u>
Illiterate	40	33	40	35
Literate	40	32	29	22
Primary	5	12	9	16
Intermediate	5	8	7	11
Secondary	7	10	13	13
University	3	5	2	3
Total Number	144399	183786	45265	89343

Source: Planning Board, 1965 Census, Kuwait, Table 25, p.220 (Arabic)
Planning Board, 1970 Census, Kuwait, Table 48, p.367 (Arabic).

More informative than the aggregate figures are the ones for individual nationalities, shown on Table 3.13. They have been ranked according to educational attainment, with the Iranian community as the least educated, and either the Lebanese or the Palestinian/Jordanian community as the most educated. If education can be seen as being related to skill level, then this information would tend to support the view that the higher the skill level, the more evenly distributed the community is by age. It is important to note that the Palestinian community, representing one third of the total of those aged ten years or more, should emerge as possibly the best educated.

3.5. Conclusion

Kuwaitis:

- i) Kuwait has a very young population which has been created by high fertility and birth rates, and low infant mortality rates. There are no signs that the rate of increase will slacken in the short term. The implication for the educational system in that it has a responsibility to educate these children, is a serious one. While it may seem that the teaching reserves of Kuwait have been stretched considerably by previous enrolment increases, those which will be necessary in the future to accommodate all the eligible children will require still further expansion.

TABLE 3.13. THE EDUCATIONAL STATUS OF PARTICULAR NON-KUWAITI COMMUNITIES

AMONGST THOSE TEN YEARS OLD OR OVER.

<u>Educational Status:-</u>	<u>Illiterate.</u>	<u>Literate.</u>	<u>Primary.</u>	<u>Intermediate.</u>	<u>Secondary.</u>	<u>University.</u>	<u>Total.</u>	<u>% of all Non-Kuwaitis:</u>
<u>Nationality:</u>								
Iranian	70.1	24.9	3.1	1.0	.46	.1	36052	13.1
Imani	57.8	31.6	7.1	2.4	.67	.2	12471	4.5
Iraqi	56.4	21.2	11.3	5.6	3.0	1.9	28730	10.4
Saudi Arabian	48.4	30.9	12.0	5.7	2.1	.64	6677	2.4
Syrian	24.6	38.2	20.0	9.0	5.5	2.1	19570	7.1
Egyptian	23.4	19.2	8.58	8.7	16.4	21.3	24599	8.9
Jordanian &	16.9	26.8	20.9	15.2	15.2	3.9	85316	31.1
Palestinian								
Lebanese	13.0	35.8	22.1	14.0	11.4	3.0	16122	5.8

Source: Planning Board, 1970 Census, Kuwait, Table 48, p.367 (Arabic).

ii) Whatever the effect of Kuwait's enormous oil reserves on economic developments, one effect has been to increase the expectancy of life of the Kuwaiti population by approximately ten years. It seems likely that this increase has been achieved mainly by improved medical facilities.

iii) There appear to be very few constraints to the growth of the Kuwaiti population, since birth control is not practiced and health standards are very high. In fact, there are several incentives to procreation; emoluments are made to parents for children, a free education is assured, eventual employment in a government post is highly likely. In addition to these family incentives, there is a wider political one to increase the population to balance the ever increasing number of non-Kuwaitis in the country. Also, it is believed that a large population will enhance Kuwait's status internationally. The only source of limitation of population growth appears to stem from the personal choice of better educated women to limit family size. Kuwait has committed herself to providing education for both sexes, and eventually a society of educated Kuwaiti mothers will emerge. It is thought that as this development proceeds, the average family size will decrease to possibly one half of its present size to about two children per family. However, it may require twenty years or more before this development is complete.

Non-Kuwaitis.

i) The non-Kuwaiti community maintained its share of the total population of 53% between 1965 and 1970 and increased at 9.6% per annum.

ii) Between 1965 and 1970 the demographic character of the non-Kuwaiti community altered as the number of women and children relative to men increased.

iii) The non-Kuwaiti community is composed of several different ethnic groups. Our main concern is with those of Arab origin, who represent 75% of the total.

iv) Most expatriate communities can be characterised as having fewer women than men, and relatively fewer children, especially those of schooling age. This reflects the purpose of the migration to Kuwait to obtain temporary employment, and the fact that generally schooling is unavailable for expatriate children.

v) Up to 1965, the large Palestinian and Jordanian community could have been characterised as in (iv) also. However, between 1965 and 1970 that community, or part of it, settled in Kuwait on a more permanent basis. By 1970 there was a more normally distributed Palestinian and Jordanian community with a relatively large number of small children.

vi) The Palestinian and Jordanian community is well educated, and an important source of labour for the needs of the Kuwaiti economy. It has been government policy to educate many of the children of this community. If this practice is maintained, further strain will be placed on the teaching resources of the educational system. If current enrolment ratios are maintained, it may be that by 1980, one third of all primary school places will be absorbed by Palestinian and Jordanian children.

vii) The expatriate community in Kuwait presents itself at once as an essential element in the economic life of the country and as a costly burden to the state. The benefits to Kuwait of the expatriates might include their contribution to G.N.P., the political stability of the country, the cultural and social life of the country. The costs associated with them include their monthly salary and the social costs they involve. Their social costs principally consist of the amounts of water, electricity, roads, health and education which they consume, times the subsidy on each item. Measurement of these costs is obviously extremely difficult. But so far as the country is concerned, we could say that further immigration to Kuwait should cease when migration has reached the point where the sum of the benefits derived from the non-Kuwaiti community is less than their total cost to the State. Until recently, the social cost of the expatriate community has been relatively small, as most non-Kuwaitis have been single men without families.

However, if the trend we noted earlier, of single men becoming heads of families continues, then clearly the social costs will increase proportionately. In fact, the radical transformation in the Palestinian and Jordanian community has already involved Kuwait in considerable additional expenditure on Social Services.

3.6. The 1970 Census.

The 1970 Population Census is thought to be inaccurate in regard to the enumeration of Kuwaitis and non-Kuwaitis. In the case of the enumeration of Kuwaitis, the Census under-reported those aged less than five years of age, and this is dealt with fully in the Appendix. Also, fewer non-Kuwaitis were counted in the Census than were actually in Kuwait. It may have been the case that the enumerators were unable accurately to cover the irregular dwellings of non-Kuwaitis, or that non-Kuwaitis deliberately avoided enumeration because of visa or work permit inadequacies. The range of undercounting which seems most likely to have occurred varies from 7.6% of the enumerated non-Kuwaiti population to 15.3%. In the Appendix, the basis for these estimates is given. The reported 1970 Census figures and the corrected figures are shown here in Table 3.14. If the larger estimate of 461,266 non-Kuwaitis is accepted, the Kuwaiti share of the population falls to 43.4%. If the estimate made in the Appendix of the natural growth rate for Kuwaitis of 3.8% is correct, and if non-Kuwaitis increased as rapidly after 1970 as they did before, then the overall Kuwaiti share of the population will fall still further.

TABLE 3.14. 1970 CENSUS AND CORRECTED 1970 CENSUS FOR KUWAITIS AND NON-KUWAITIS.

	<u>KUWAITIS</u>				<u>NON-KUWAITIS</u>		<u>Grand Total</u>
	<u>Male.</u>	<u>Female.</u>	<u>Total.</u>	<u>% of Total.</u>	<u>Total.</u>	<u>% of Total.</u>	
1970 Reported	175,513	171,883	347,396	47.0	391,266	53.0	738,662
1970 Corrected	179,044	175,485	354,529	45.6	421,266	54.4	775,795
				43.4	461,266	56.5	815,795

Source: Tables 3.16A, 3.16B and 3.20.

There is evidence from two sample surveys subsequent to the 1970 population census that the estimates in Table 3.14 are of the correct magnitude.

A population estimate made by the Planning Board in May of 1973¹⁶ and based on a sample of 77,454 Kuwaitis (roughly 20% of the total population) placed the total Kuwaiti population at 391,500 persons. Also, in April 1973, a Manpower Survey¹⁷ was carried out which included an estimation of population. The sample size was 64,475 Kuwaitis, roughly 18% of the population. Using this sample, total Kuwaiti population was estimated at 395,780 persons.

The total Kuwaiti population estimate of these two samples would require a natural growth rate of approximately 4.1% per annum. This is a comparable figure with the estimate made in the Appendix of 3.8%. The total 1973 population is estimated as 861,200 and 871,150 persons in the population and manpower sample surveys respectively. This gives the Kuwaitis a share of total population of approximately 45%. Over a ten year period the Kuwaiti share of population has fallen from 47% to 45%, which confirms the direction of the trend of the population balance noted earlier.

APPENDIX1. The Kuwaiti Population.

It is thought that the 1970 census total was incorrect as a result of the undercounting of babies and small children in the "0-4" age cohort. This is a relatively common weakness of censuses in developing countries.¹⁸ Inspection of Figure 3.1. will show that given the expanding base of the age pyramid of Kuwaitis in 1965 and 1970, extrapolation of the trend would have produced a "0-4" cohort of a larger size in both years. The records of births show no sudden fall from 1965 onwards, such as might explain a small "0-4" age cohort in 1970. One task of this Appendix is to correct the "0-4" age cohort of the 1970 census for undercounting.

The "reverse cohort survival" method¹⁹ will be used for this purpose. It is thought that undercounting took place in 1965 in the "0-4" age cohort. The 1970 "5-9" age cohort will be inspected to see if it is any larger than the "0-4" 1965 cohort in five years. The amount by which the 1970 "5-9" cohort exceeds the 1965 "0-4" cohort, corrected for mortality, represents those who survive from all those who were not counted in 1965 in the "0-4" age cohort. We will thereby obtain a percentage of undercounting in 1965 in the "0-4" age cohort. Then we assume that the same level of undercounting took place in 1965 in the "0-4" age cohort as took place in the 1970 census in the "0-4" age cohort. This process will be done for each sex, as different rates of undercounting may have occurred.

This comparatively simple operation is complicated for Kuwait by the fact that the Kuwaiti population grew over the period as a result of the urbanisation of nomadic Kuwaitis who had previous been living in the desert, and who were not enumerated in the 1965 Census. Most of these additions were desert Bedouin. For the purpose of exposition, the

persons added to the Kuwaiti population between 1965 and 1970 that were not the result of natural increases will be termed 'Bedouin'. This does not mean to imply that this group is not of Kuwaiti origin, and it does assist the exposition of a complicated situation.

Our first task is to determine how many Bedouin were added to the "5-9" age cohort in 1970. We do this by comparing each five year age cohort between the ages of 10 and 55 in the 1970 Census with the corresponding 1965 age cohorts corrected for mortality. In other words, the 1965 "5-9" age cohort is corrected for five years attrition and compared with the 1970 "10-14" age cohort.

The first step, however, is to determine what the probability of survival is for each cohort between the ages of 5 and 55. Earlier in this chapter it was proposed after reviewing the available information on mortality, to double the reported mortality statistics when estimating future population. By using the doubled mortality statistics and United Nations Life Tables, we can calculate to the overall "mortality level" in Kuwait of Kuwaitis. Populations tend to experience mortality at one level or another consistently throughout the population. Occasionally, a change in a relevant factor can alter the level of mortality and this occurred in Kuwait thirty years ago. Use of the United Nations Life Tables, combined with a smoothing technique in estimating the probability of survival is a way of overcoming the irregularities which occur in the reporting of deaths, and provides a more accurate picture of mortality than would have been found if doubled crude death rates alone had been used. It also provides for the possibility of interpolation and prediction of mortality for age cohorts whose reported mortality level is particularly suspect, like the "0-4" and the "75+" age cohorts.

What has been described here is shown in Tables 3.15A and B. Column (1) shows the 1970 population; Column (2) shows the doubled age specific deaths for 1970; Column (3) shows the doubled age specific mortality rate,

Column (4) shows the level of mortality corresponding to that rate, and Column (5) shows the smoothed mortality level. Column (6) shows the assumed mortality level, which is an average of Column (5), except in the case of the "0-1" and "1-4" age cohorts, where it is assumed that the mortality level of those slightly older holds for that group also. The opportunity to interpolate a mortality level for the "0-4" age cohort represents a very significant advantage of this method. It means that we have not simply doubled the crude death rates of that age cohort, but predicted the mortality from the overall mortality of the population. This is a much more satisfactory approach to the mortality of that particular age cohort than simply doubling the crude death rate.

Column (7) shows the probability of survival of one cohort to the next. By using this probability of survival, we can now correct the 1965 "5-55" year population for attrition up to 1970. Tables 3.16A and B show in Column (1) the 1965 population and in Column (2) the 1965 population corrected for five years attrition; i.e. multiplied by the probability of surviving. Column (3) shows the number of enumerated Kuwaitis in the 1970 Census, and Column (4) the additional numbers of Kuwaitis who are the 'Bedouin'. Since it is thought extremely unlikely that the Bedouin population recorded their age correctly, this population is smoothed using the formula:

$$S = \frac{1}{16} (-S_{-2} + 4S_{-1} + 10S + 4S_{+1} - S_{+2})^1$$

where S = the age cohort being smoothed, and where S_{-1} , S_{-2} and S_{+1} , S_{+2} are the age cohorts above and below S respectively.²⁰

Column (5) shows the Smoothed Bedouin population, and by projecting the trend of population distribution, the "0-4" and "5-9" Bedouin age cohort is estimated. These two projected age cohorts are shown in Column (6).

We are now in a position to calculate the undercount in 1965 in the "0-4" age cohort, and to correct the 1970 "0-4" age cohort for undercounting. The undercounting of the "0-4" age cohort in 1965 emerges as 11.3% for men and 12.0% for women. When corrected by these factors, the 1970 "0-4" age cohort increased from 34,066 to 37,135 for boys, and from 33,800 to 37,100 for girls.

The individual steps of calculation are summarised here:

Kuwaiti Men;

No. of Kuwaitis aged "0-4" in 1965 = 22,405 (Table 3.16A, Column (1)).

Probability of Kuwaitis aged "0-4" in 1965 surviving to 1970 = .9765.

No. of survivors in 1970 of the Kuwaiti cohort aged "0-4" in 1965 = 21,878 (Table 3.16A, Column (3)).

No. of Kuwaitis enumerated in 1970 aged "5-9" = 30,601 (Table 3.16A, Column (4)).

No. of Extra Kuwaitis in the "5-9" cohort in 1970 = 8,723 (Table 3.16A, Column (5)).

Of this increase, number of Bedouins = 5,870 (Table 3.16A, Column (7)).

No. of extra Kuwaiti boys in "5-9" cohort in 1970 = 7,723 - 5,870 = 2,853.

The number of boys in 1965 aged "0-4" which would generate 2,853 children in 1970 aged "5-9" = $\frac{2,853}{.9765} = 2,921$.

The number of non-enumerated boys in 1965 = 2,921.

The percentage this represents of the 1965 "0-4" age cohort

$$= \frac{2,921}{22,405} \times 100 = 13.0\%$$

The 1970 "0-4" age cohort = 34,066 (Table 3.16A, Column (4)).

The number of Bedouin children in the 1970 "0-4" age cohort = 6,900 (Table 3.16A, Column (7)).

∴ The number of Kuwaitis in the 1970 "0-4" age cohort = 27,166.

The number of Kuwaitis in the 1970 "0-4" age cohort corrected for a 13% undercount = 30,697.

Total "0-4" age cohort in 1970 = 30,697 + 6,800

$$= 37,597.$$

Kuwaiti Women:

No. of female Kuwaitis age "0-4" in 1965 (Table 3.16B, Column (1)).	= 21,753
Probability of female Kuwaitis aged "0-4" in 1965 surviving to "5-9" in 1970: (Table 3.16B, Column (2)).	= .9844
No. of survivors in 1970 of the cohort aged "0-4" in 1965. (Table 3.16B, Column (3)).	= 21,413.
No. of Kuwaitis enumerated in 1970 aged "5-9" (Table 3.16B, Column (4)).	= 29,837
No. of extra Kuwaitis in the "5-9" cohort in 1970	= 8,424
Of this number, Bedouin component (Table 3.16B, Column (5)).	= 5,610.
No. of extra Kuwaiti girls in "5-9" cohort in 1970	= 2,814
The number in 1965 aged "0-5" which would generate 2,814 Kuwaiti girls in 1970 aged "5-9"	= 2,858
The number of non-enumerated girls in 1965	= 2,858
The percentage this represents of the 1965 "0-4" cohort	= $\frac{2,858}{21,753}$
The 1970 "0-4" age cohort = 33,800 (Table 3.16B, Column (4)).	
The number of Bedouin children in the 1970 "0-4" cohort = 6,300	
. . The number of Kuwaitis in the 1970 "0-4" cohort = 27,500	
The number of Kuwaiti girls aged "0-4" in 1970 corrected for a 13.1% undercount	= 31,102
The total 1970 "0-4" age cohort	= 31,102 + 6,300 = 37,402.

Table 3.17 shows the 1970 figure corrected for this undercounting by age cohort, and the estimated 1975 population by age cohort also. The total Kuwaiti population in 1970 is found to be 354,529 persons, and the 1975 Kuwaiti population is estimated at 427,590 persons, an annual rate of growth of 3.8%. This is a fairly high growth rate, but one which is consistent with the low mortality and high birth rates of Kuwaitis.

Table 3.18 summarises the information on Table 3.17 regarding those persons aged 15-60 in the Kuwaiti population, and represents the potential labour force.

Table 3.19 lists those Kuwaitis aged six years in 1970, and the projection of the number of six year olds in each year up to 1980, by sex. We will use these data in Chapter 5 to calculate the future school population.

TABLE 3.15A. AN ABRIDGED LIFE TABLE TO SHOW THE PROBABILITY OF SURVIVAL OF KUWAITI MALES.

Age Cohort	(1) 1970 Census Population	(2) Number of Deaths.	(3) Mx/1000.	(4) Level in 1970.	(5) Average Level.	(6) Assumed Level.	(7) Px/1000.
0	6162	690	111.9	75	78.75	85	.9765
1-4	27904	212	7.5	82.5	74.5	85	.9924
5-9	30601	100	3.27	67	69.5	85	.9914
10-14	23704	46	1.9	72	87.25	85	.9871
15-19	16612	16	1.0	102.5	101.25	85	.9847
20-24	13635	18	1.3	100	92.5	85	.9840
25-29	11885	36	3.0	85	87.5	85	.9822
30-34	9922	26	2.6	90	86.25	85	.9779
35-39	8857	38	4.2	82.5	80.0	85	.9696
40-44	6416	40	6.2	77.5	78.75	70	.9359
45-49	5198	42	8.0	80	65	65	.8985
50-54	4605	94	20.4	50	57.5	56	.8349
55-59	2524	56	21.7	65	55	44	.7770
60-64	2583	106	41.0	45	33.75	44	.6942
65-69	1418	114	80.0	22.5	32.5	44	.5864
70-74	1743	162	90.2	42.5	41.25	44	.4562
75-79	696	94	134	40	48.75	44	
80-84	628	108	171	57.5		44)	
85+	420	208	49.5	2.5		44)	.2613

Note: Column (2) contains the age specific death rates pertaining in Kuwait x 2.

The "levels" which are adjusted and referred to in Columns (4), (5), (6) are United Nations Life Tables terminology, and reflect a level of mortality.

Column (7) is calculated from United Nations Probability Tables, No.5, in Population Studies No.25, referred to in the Sources.

Sources: 1970 Census, Table 1. Statistical Abstract, 1971, Planning Board, Kuwait, Table 23, "Deaths Registered According to Sex and Age Groups", p.58.

United Nations, Population Studies, No.25, Life Tables I & V, pps. 72 & 73 and 80 & 81.

TABLE 3.15B. AN ABRIDGED LIFE TABLE TO SHOW THE PROBABILITY OF SURVIVAL OF KUWAITI WOMEN.

Age Cohort.	1970 Census Population	No. of Deaths.	Mx/1000	Level in 1970	Average Level	Assumed Level	Px/1000
0	5944	648	109.0	70	75	90	.9844
1-4	27856	220	7.9	80	75	90 (0.4)	.9948
5-9	29837	88	2.94	70	78.75	90	.9914
10-14	22055	24	1.0	87.5	91.25	90	.9914
15-19	18275	22	1.1	95	100	90	.9896
20-24	14442	12	0.83	105	100	90	.9884
25-29	13466	24	1.8	95	83.75	90	.9868
30-34	8868	20	2.2	92.5	82.5	85	.9734
35-39	7818	40	5.1	72.5	73.25	73	.9674
40-44	5026	28	5.5	75	73.25	73	.9570
45-49	4206	32	7.6	72.5	75.75	73	.9425
50-54	4310	38	8.8	80	85	73	.9146
55-59	2033	22	10.7	90	76.25	73	.8707
60-64	2730	70	25.6	62.5	56.25	73	.8014
65-69	1284	62	48.2	50	75	63	.6747
70-74	1995	94	47.1	87.5	63.75	55	.5296
75-79	624	78	12.5	40	55	55)	.3099
80-84	638	90	14.1	70		55)	
85+	478	192	401	7.5		55)	

Source: As for Table 3.15A.

TABLE 3.16A. CORRECTED 1970. CENSUS FOR KUWA ITI MEN.

Age Cohort	(1) 1965 Male Population:	(2) Probability of Surviving, per 1000.	(3) Corrected 1965 Pop- ulation in 1970.	(4) Actual 1970 Enumerated Population.	(5) Net Addition of Bedouins.	(6) Smoothed Bedouin Population.	(7) Estimated Bedouin Population in 1970.	(8) Corrected 1970 Census.
0-4	22405	.9765	21878	34066	8723		6900	37597
5-9	10285	.9924	19138	30601	4566		5870	30601
10-14	13442	.9914	13326	23704	3286	3426	5050	23704
15-19	9609	.9871	9485	16612	4150	3814		16612
20-24	8715	.9847	8581	13635	3304	2930		13635
25-29	8958	.9840	8814	11885	1108	2356		11885
30-34	6473	.9822	6357	9922	2500	1668		9922
35-39	5812	.9779	5868	8857	548	1501		8857
40-44	4091	.9696	3966	6416	1232	1016		6416
45-49	3782	.9359	3539	5198	1066	928		5198
50-54	3028	.8985	2720	4605	196			4605
55-59	1733	.8349	1446	2524	1437			2524
60-64	2014	.777	1564	2883	3431			2883
65-69				4905				4905
70-74								

Source: 1965 Census, Table 9, p.75 (Arabic).

TABLE 3.16B. CORRECTED 1970 CENSUS FOR KUWAITI WOMEN

<u>Age Cohort</u>	<u>1965 Female Population.</u>	<u>Probability of Surviving, per 1000.</u>	<u>Corrected 1965 Population in 1970.</u>	<u>Actual 1970 Enumerated Population.</u>	<u>Net Additions of Bedouins.</u>	<u>Smoothed Bedouin Population.</u>	<u>Estimated Bedouin Population in 1970.</u>	<u>Corrected 1970 Census.</u>
0-4	21753	.9844		33800			6300	37402
5-9	18550	.9948	21413	29837			56100	29837
10-14	12507	.9941	18453	22055	3602		5200	22055
15-19	10588	.9914	12433	18275	5842	4692		18275
20-24	9060	.9896	10496	14442	3946	4759		14442
25-29	8704	.9884	8965	13466	4501	3297		13466
30-34	5546	.9868	8603	8868	265	1560		8868
35-39	4786	.9734	5472	7818	2346	863		7818
40-44	3489	.8674	4658	5026	368	1050		5026
45-49	2736	.9570	3375	4204	829	853		4204
50-54	2983	.9425	2618	4310	1692			4310
55-59	1418	.9146	2811	2033	-778			2033
60-64	2169	.8707	1296	2730	1434			2730

Source: 1965 Census, Table 9, p.75 (Arabic).

1970 Census, Table 1, p.1. (Arabic).

TABLE 3.17. CORRECTED 1970 POPULATION AND ESTIMATED 1975-1980 POPULATION
BY AGE FOR KUWAITI MEN AND WOMEN.

Age Cohort:	1970 Corrected Population.	Probability of surviving the five years, per 1000.	Estimated 1975 Population	Estimated Elements of the 1980 Population	1970 Corrected Population	Probability of surviving the five years, per 1000.	Estimated 1975 Population	Estimated Elements of the 1980 Population.
0-4	37597	.9765	43179		37402	.9844	41559	
5-9	30601	.9924	36713		29837	.9948	26818	
10-14	23704	.9914	30368	36433	22055	.9941	29681	36626
15-19	16612	.9871	23500	30106	18275	.9914	21924	29505
20-24	13635	.9847	16397	23196	14442	.9896	18817	21735
25-29	11885	.9840	13426	16146	13466	.9884	14291	17928
30-34	9922	.9822	11694	12311	8868	.9768	13309	14125
35-39	8857	.9779	9745	11485	7818	.9734	8750	13133
40-44	6416	.9696	8587	9529	5026	.9674	7610	8517
45-49	5198	.9359	6004	8325	4204	.9570	4862	7361
50-54	4605	.8985	4837	5619	4310	.9425	4025	4652
55-59	2524	.8349	4137	4346	2033	.9146	4062	3793
60-64	2583	.777	2107	3453	2730	.8707	1859	3715
65-69	1418	.6942	2006	1637	1284	.8014	2377	1618
70-74	1743	.5864	984	1392	1995	.6747	1028	1904
75-79	696	.4562	1022	577	624	.5296	1346	693
80+	1048	.2613	590	620	1116	.3099	676	921
Total	179044		215296		175485		212294	

Note: The "0-4" age cohort is projected to 1970 by assuming that the crude birth rate is 25 live male births and 24 live female births per 1000, as it was suggested in Section 2. The mortality levels used are the 1970 yearly rates, doubled, found on Tables 3.15A and B. Column (3).

Source: Tables 3.15A and 3.15B.

TABLE 3.18. POTENTIAL KUWAITI WORKFORCE
IN 1970, 1975 AND 1980. BY SEX.

<u>Year</u>	<u>1970</u>	<u>1975</u>	<u>1980</u>
Sex:			
Male	79,654	98,917	121,963
Female	78,442	96,950	120,749
Annual Compound Growth Rate	4.5	4.4	

Source: Table 3.17.

TABLE 3.19. KUWAITI GIRLS AND BOYS AGED SIX,
BY CALENDAR YEAR, 1970-1980.

<u>Year</u>	<u>Kuwaiti Boys</u>	<u>Kuwaiti Girls</u>
1970	6395	6309
1971	6651	6633
1972	6673	6941
1973	7216	7257
1974	7446	7469
1975	7671	7637
1976	7034	6969
1977	7739	7476
1978	8024	7755
1979	8418	8034
1980	8605	8312

Note: This table is compiled by using the same assumption of mortality and births which were used in compiling Table 3.17. To separate the 1970 "0-5" age cohort, Sprague Multipliers were used. See Footnote 11.

2. Non-Kuwaitis.

The 1970 Census recorded 391,266 non-Kuwaitis in Kuwait, and their share of the total population as 53%. There is considerable uncertainty over the accuracy of this figure and there is evidence from other sources which suggests that the non-Kuwaiti community is very much larger than the Census figures suggest. There is no very precise alternative method of estimating the size of the non-Kuwaiti community, and in this Appendix the estimates which suggest a larger population will be considered.

One alternative method of estimating the 1970 non-Kuwaiti population is to take the 1965 population figures by nationality and adjust them for five years of arrivals and departures. In Table 3.20, Column (1) shows the reported 1965 position by nationality, Column (2) shows these totals in 1970 corrected for arrivals and departures and Column (3) shows the 1970 Census figures. Comparison of Columns (2) and (7) shows that either the arrivals and departure statistics, the 1965 Census or the 1970 Census figures are inaccurate. There is, however, a reasonable degree of similarity amongst the two totals for the better educated expatriate communities. For example, the Jordanians and Palestinians, the Lebanese, the Egyptians, the Indians and Pakistanis all have totals roughly similar by each method. The major inaccuracies in records of population and movement are thought to relate to groups which specialise in manual and unskilled work, such as the Iraqis, the Iranians and the Omanis. The Table shows that it is in these groups that the widest variations occur between Columns (2) and (3).

Arrivals and departures statistics are notoriously unreliable and not much weight can be placed on them. By combining them with the 1970 Census figures and taking the larger figure for each nationality, the non-Kuwaiti total in 1970 rises to 580,694 from 391,266, as shown by

Column (4).

The adjusted total seems rather excessive, and there is evidence from government sources²¹ that the number of additional non-Kuwaitis varies between 30,000 and 60,000, depending upon the amount of construction activity there is. The majority of the unofficial immigrants are thought to be involved in the construction industry.

An estimate was made of the size of the non-Kuwaiti community by the authors of Kuwait's "Physical Master Plan", based on the density of houses, and traffic movements. This placed the non-Kuwaiti community in 1970 at 461,500 persons.²²

The evidence from three sources suggests that the non-Kuwaiti community is larger than were enumerated in the 1970 Census. On the basis of these three sources we may conclude that the non-Kuwaiti community was undercounted in the 1970 Census by at least 30,000 persons, and possibly by as many as 70,000 persons. If the latter figure is accepted, the non-Kuwaiti share of the total rises from 53% to 57%.

TABLE 3.20. TOTAL NUMBERS OF NON-KUWAITIS BY NATIONALITY, 1965 & 1970.

Column	(1) Nos. in 1965 & % share	(2) Total nos. corrected for net arrivals in 1970.	(3) Recorded Census 1970 totals	(4) Corrected total for 1970 with percentage share
Country of Origin				
Jordan & Palestine	77712 27%	138838	147696 37.7%	147696 25%
Iraq	25897 9%	85708	39066 9.9%	85708 15%
Syria	16849 6%	55598	27217 6.1%	55598 10%
Lebanon	20877 7%	35358	25387 6.5%	35358 6%
Egypt	11021 4%	32463	30421 7.7%	32463 6%
Oman	19520 7%	20124	14670 3.7%	20124 3%
Saudi Arabia	4632 2%	79388	10897 2.7%	79388 14%
Sudan	418 -	2016	733 0.2%	2016 0.4%
Bahrain	747 0.3%	10893	966 0.2%	10893 2%
Yemen (North & South)	2635 1%	7751	8604 2.1%	8604 1%
Other Arab Nationalities	6236 2%	15590	6915 1.7%	15590 3%
Non-Arab Asians:				
Iran	30790 11%	22141	39129 10%	39129 6%
India	11699 4%	18632	17336 4.4%	18632 3%
Pakistan	11735 4%	14101	14712 3.7%	14712 2%
Other Asians	280 -	10518	262 -	262 -
Japan	- -	774	400 -	774 0.1%
Other Africans	412 1%	1234	676 -	1234 0.2%
United Kingdom	2837 1%	1908	2736 0.7%	2736 0.5%
Other Europeans	992 0.3%	7887	816	7887 1%
Americans	476 0.1%	1800		1800 0.3%
	286312		391266	580694

Sources: Planning Board, 1965 Census, Kuwait.
Planning Board, 1970 Census, Kuwait.
Statistical Abstract 1973. Planning Board, Kuwait, Tables 90 and 91.

PART II.BAHRAIN.Introduction.

Bahrain is unlike Kuwait or Qatar in that nationals are in a large majority on the island. In common with these two, there is a high rate of population growth and a relatively young population.

3.7. Demographic Characteristics of the Population

Bahrain is a state composed of thirty islands,²³ most of which are very small and uninhabited. The two populated islands are Bahrain itself, and its close neighbour, Mahurraq. These islands lie approximately fifty miles to the North West of Qatar.

For at least a thousand years, Bahrain has been a trading centre; consequently the people of Bahrain are mixed ethnically between Persians, Asians and Bahraini Arabs. The Bahrainis themselves are composed of Shi'ite Arabs of Persian and Iraqi extraction, more orthodox Sunni Arabs, and some are of African descent, originally associated with the slave trade.²⁴

The traditional activities of Bahrain have been pearling, fishing, trading and agriculture. The pearling industry collapsed in the 1920's, and due to the increasing salinity of the water, agriculture has generally declined in importance. The most significant event for Bahrain this century was the discovery of oil in 1925, and its production in 1932. Not only has the oil provided a source of government revenue, but it also has created an industry which requires a sizeable workforce.

The population has grown steadily since oil was found, but not as rapidly as in Kuwait or Qatar. The 1941 Census showed a total population of about 90,000, 16%²⁵ of whom were non-Bahrainis. In 1971 the total population had risen to 216,078 persons, 17.5%²⁶ of whom were non-Bahrainis. Bahrain is very different from Qatar in the number of expatriates living in

the country.

The Bahraini population is extremely young. In 1971, 48.4% of the population was aged less than 15 years.²⁷ The ratio of "5-14"s in the same year was .93,²⁸ which makes Bahrain the youngest population of the three states we have so far considered. Figure 3.4 provides visual confirmation of this point; it also shows that the same undercounting of babies and small children occurred in Bahrain in 1965 and 1970 as occurred in Kuwait and Qatar in their census years. In recent years, there are indications of a very rapid increase in the number of young children. From Fig.3.4, it would appear that a raised crude birth rate took place approximately 25-30 years from the time of the development of oil resources.

There are no reliable records of births and deaths, but it is thought that there is a high birth rate. By considering the two population censuses of 1965 and 1971, we can establish the approximate mortality level of Bahrainis. Using United Nations' Life Table, Bahrainis are found to have a mortality level of 82.5, and a life expectancy at birth of 61.8 years in 1971.

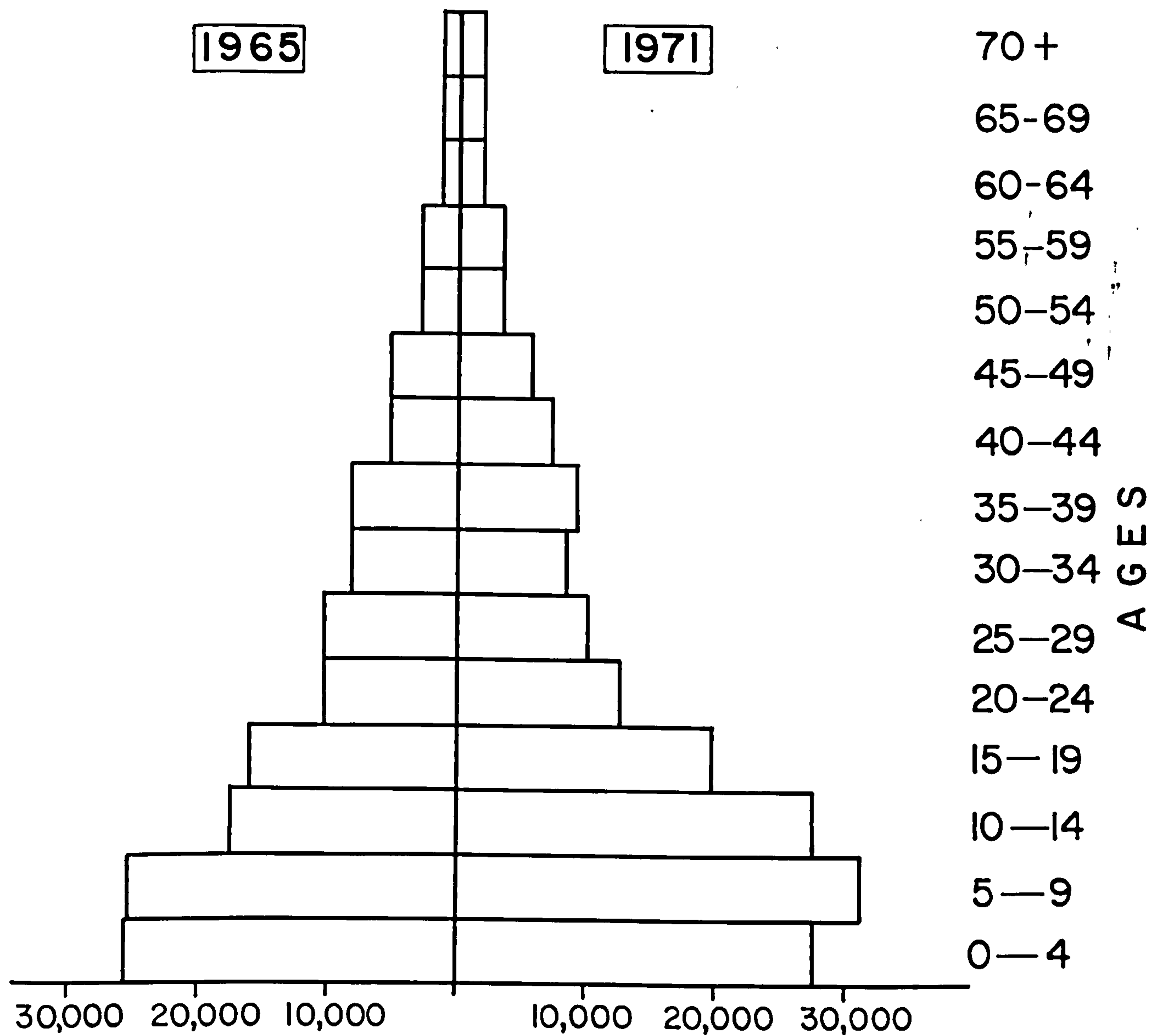
A high proportion of Bahraini men of working age are literate and particularly younger men. Similarly, most of the young women are literate, but the proportion falls rapidly as older age groups are considered. Table 3.21 shows that most Bahraini mothers are illiterate.

TABLE 3.21. PERCENTAGE OF BAHRAINIS LITERATE, BY SEX, 1971.

<u>Age:</u>	<u>Men:</u>	<u>Women:</u>
10-14	83.8	64.4
15-19	91.5	60.3
20-24	85.2	40.9
25-29	67.8	22.1
30-34	50.5	12.7
35-44	32.7	6.2
45-54	20.7	2.6
55-64	15.3	1.7
65+		

Source: Census, 1971, B. Form No.15, p.67.
Statistical Bureau, Census 1971, Bahrain, Form No.15, p.67.

Fig. 3.4 AGE SEX POPULATION PYRAMID OF BAHRAINIS IN 1965 AND 1971



Source: Finance Dept; Bahrain, the fourth Population Census of Bahrain, Table 20, P.11
Census, 1971, Bahrain, statistical Bureau, form no.5

Although there are fewer non-Bahrainis than there are non-Kuwaitis and non-Qataris, in proportion to the total population, their demographic features closely resemble those of expatriate groups in neighbouring countries. Fig.3.5. shows the by now familiar lopsided distribution towards men, and an absence of children of school age. Men outnumber women by roughly 2.5 to 1.

There are three dominant national groups in the non-Bahraini community: Omanis, Persians and Asians. There is a small Jordanian/Palestinian community, and a significant British community, as shown by Table 3.22.

TABLE 3.22. NON-BAHRAINIS BY NATIONALITY, 1971.

<u>Nationality</u>	<u>Number</u>	<u>%</u>
Asians	13,034	31.6
Omanis	10,785	28.4
Persians	5,097	13.4
Iraqis	1,538	4.0
Jordanian/Palestinian	1,338	3.5
British	2,901	7.6
Others	4,192	11.9
Total	37,885	100.0

Source: 1971 Census, Bahrain, Form No.7, p.2.

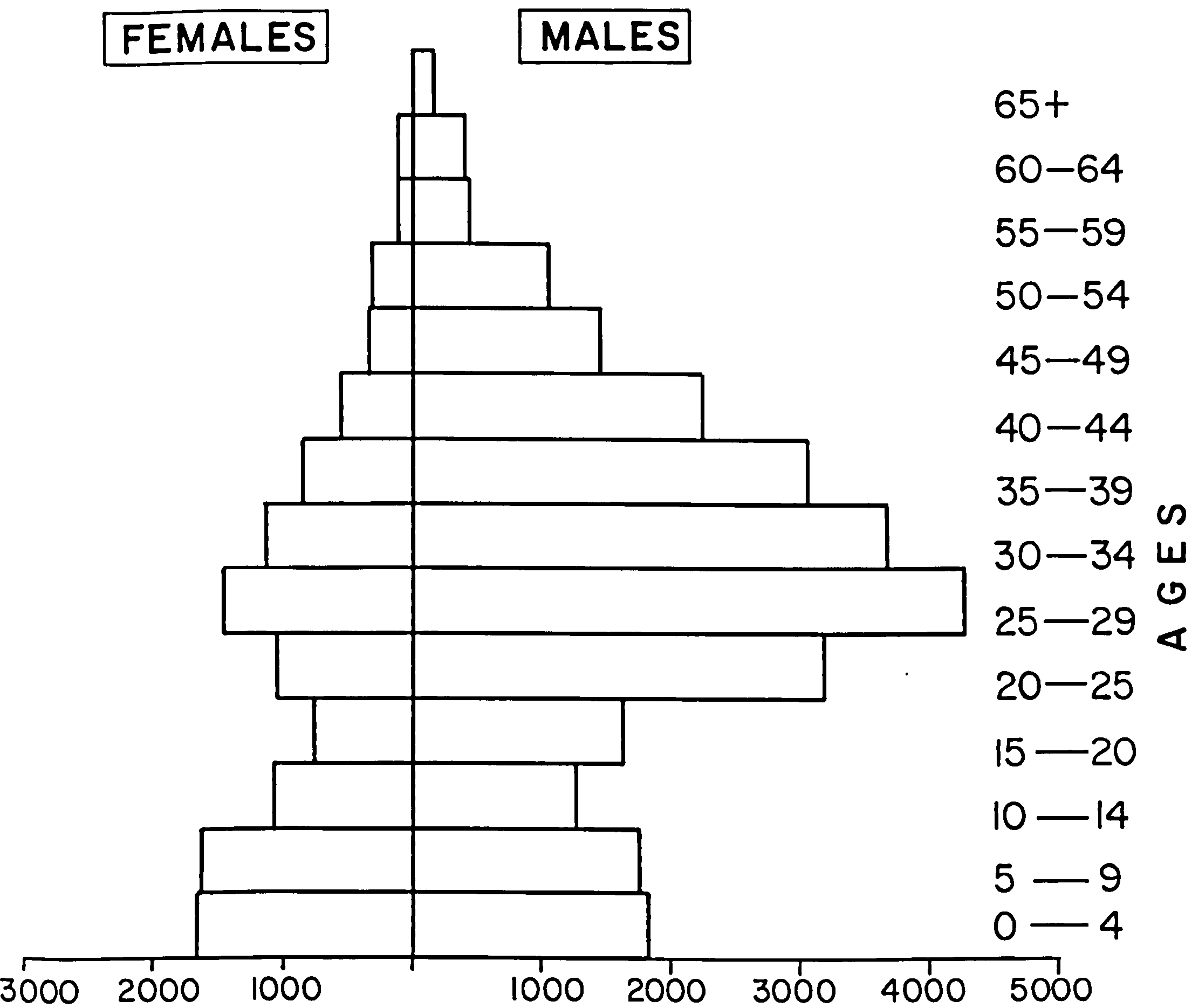
On the whole, the non-Bahraini community is not well educated, and Table 3.23 shows the extent of literacy for each age cohort. It is interesting to note that most non-Bahraini women are literate, and a higher proportion than Bahraini men are literate.

TABLE 3.23. PROPORTION OF NON-BAHRAINIS LITERATE IN EACH AGE COHORT BY SEX, 1971.

<u>Age</u>	<u>Men</u>	<u>Women</u>
6-14	77.0	80.3
15-19	41.5	73.9
20-24	34.1	62.4
25-29	38.8	68.9
30-34	41.0	64.3
35-44	43.4	54.8
45-54	43.8	29.2
55-64	26.7	14.3

Source: 1971 Census, Bahrain, Form No.9 and No.18.

Fig.3.5 AGE SEX POPULATION PYRAMID OF NON
BAHRAINIS IN 1971



Source: Census, 1971, Form No. 5

3.8. Conclusion

- i) Bahrain, unlike Qatar or Kuwait, has a very limited dependence on expatriate labour, and non-Bahrainis account for less than 20% of the total population.
- ii) The Bahraini population is exceptionally young. It is even younger than the populations of Kuwait or Qatar.
- iii) A high birth rate and a presumably low infant mortality rate has continued to generate ever increasing numbers of Bahrainis aged less than 5 years. As a result, it will be necessary for the educational system to expand rapidly, and maintain this expansion until the rate of increase of young children slows down.
- iv) There is evidence that each new cohort which enters the workforce is better educated than the previous one. A greater degree of education amongst Bahraini mothers would probably reduce the current very high birth rate.

PART III.QATAR.

Introduction:

Although Qatar's population is much smaller than that of Kuwait, she shares many demographic features. The Qatari population is relatively young, and is outnumbered by Non-Qataris by three to two. As a result of a higher participation rate amongst non-Qataris, their share of the workforce is even higher - 83% in 1970. There is every sign that the Qatari share of both the population and the workforce will steadily diminish, particularly as Qatar's ambitious plans to industrialise proceed.

3.9. Demographic Characteristics of the Population.

The State of Qatar, which lies 350 miles to the south of Kuwait in the Arabian Gulf, is a Peninsula which projects true North for about 100 miles and has a width of approximately 55 miles.³⁰ The original inhabitants were Bedouin nomads seeking the fertile areas in the North of Qatar. A community settled in Doha, the port on the eastern coast of Qatar; the main activities of this community were fishing and pearling. Before the development of the Japanese "cultured" pearl Qatar's pearling fleet of 400 dhows³¹ accounted for one third of the entire Gulf fleet. With the general collapse of the pearling industry in the early 1920's, Qatar experienced a general economic depression which was shared by Kuwait and Bahrain. Prior to 1970, records of population consist of personal estimates; one estimate of population made in 1950 placed it at "some 25,000".³² Oil was first discovered in 1937 but it was not until 1949 that oil was actually exported from Qatar. Since 1950 the population has increased very rapidly, and the census taken in April of 1970 showed a total of 111,133 persons: 45,039 (40.5%) of whom were Qataris.³⁴ A consideration of Table 3.24 will show that although the population of

Qatar is much smaller than that of Kuwait, she shares a very similar overall population structure to Kuwait. Non-Qataris represent 59.5% of the total population, and non-Qatari men represent 44.1% of the total population and 68.4% of the male population.

TABLE 3.24. AGE DISTRIBUTION OF QATARIS AND NON-QATARIS
BY SEX IN 1970.

	<u>QATARI</u>			<u>NON-QATARI</u>		
	<u>Male</u>	<u>Female</u>	<u>Total</u>	<u>Male</u>	<u>Female</u>	<u>Total</u>
0-4	4308	4320	8620	3920	3812	7732
5-9	4402	4223	8625	2910	2869	5779
10-14	3272	3037	6309	2205	1573	3778
15-19	1992	1941	3863	4224	1199	5423
20-29	2143	2708	4851	15446	3535	19001
30-39	2274	2554	4828	12275	2359	14634
40-49	2005	1512	3517	5531	1004	6535
50-59	1233	934	2167	1860	395	2555
60-74	897	935	1832	595	266	861
75+	212	207	419	60	36	96
Total	22268	22371	45039	49046	17048	66094

Source: 1970 Census, Qatar, Table 10.

The age distribution of Qataris is also similar to that of Kuwaitis. 52.3% of the population is aged less than 15,³⁵ and using the ratio of those aged "5-14" to those aged "15-64" as a measure of the "youthfulness" of the population, as we did for Kuwait, Qatar emerges as an even younger population than Kuwait. The ratio for Qatar is .75, compared to .66 for Kuwait. Figure 3.6 shows the age distribution of Qataris and non-Qataris and the familiar phenomenon of undercounting of those aged "0-4" is apparent. The figure also suggests that an increase in the birth rate or a decrease in the mortality rate of young children occurred about twenty years ago, five years after the oil revenues had first been received.³⁶

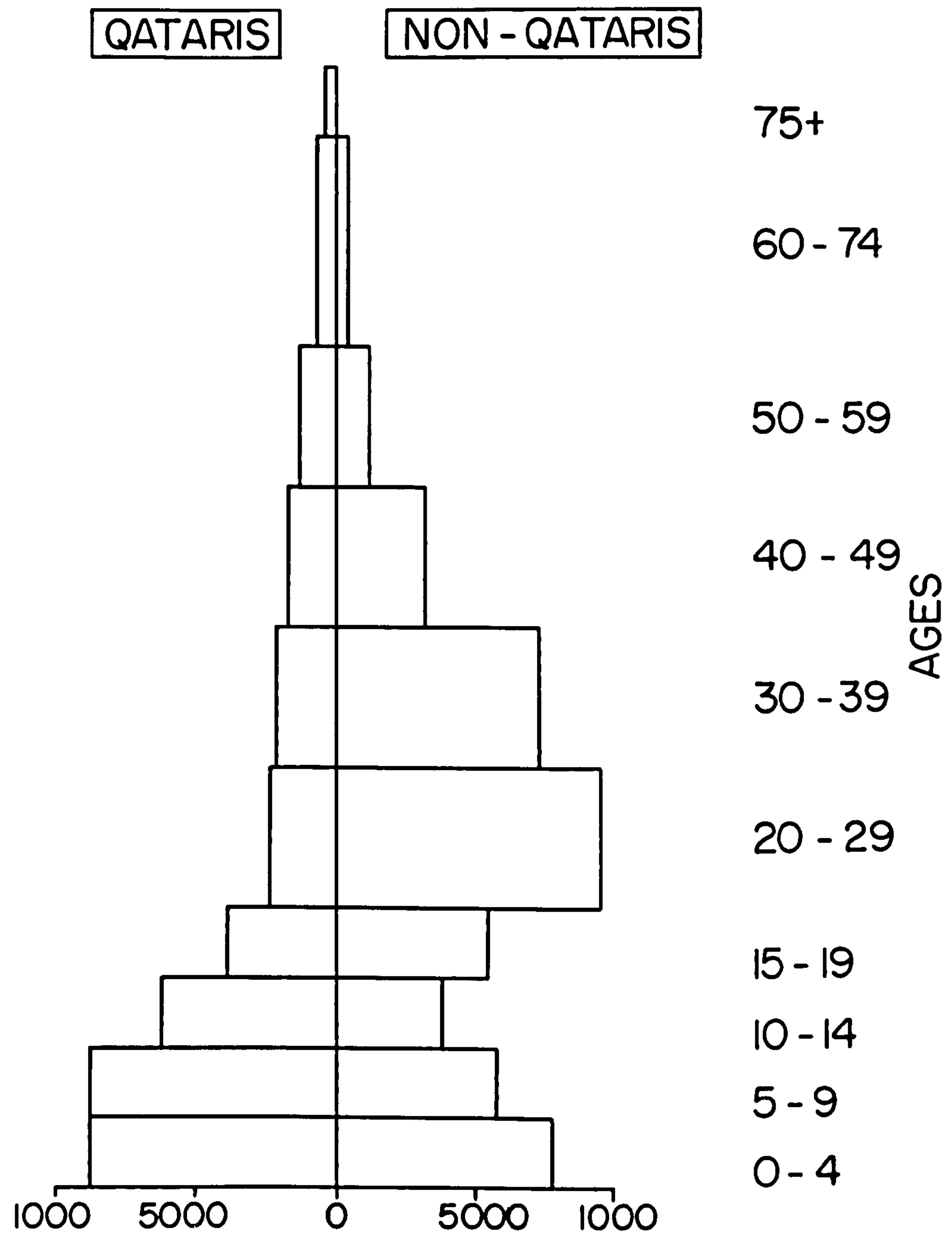
No mortality or birth statistics are kept, but the health facilities and the standards of hygiene are reported to be very good, and mortality probably is experienced at a low level amongst Qataris. The age distribution

of Qataris suggests that the birth rate has been relatively high in recent years. If the "0-1" cohort in the 1970 Census is taken to represent all the surviving births from the previous year, then a crude birth rate of 29/1000 is found. If a very simple undercount correction is made to the "0-1" cohort, and its total number raised by 20% to 1,550, the crude birth rate rises to 34/1000. This figure is thought to be of the correct order.

The maximum rate of increase possible for the indigenous Qatari population would be 3.2%. From 1970 onwards, that rate, or something very close to it was probably experienced by Qatar. By 1975 the Qatari population probably stood at approximately 52,700. The non-Qatari population could have increased at any rate between 5% and 25% per annum from 1970 onwards. The non-Kuwaiti population increased at 9.6% from 1965 to 1970, and if we gross up the non-Qatari population to 1975 at 9.0%, we obtain 117,279 persons. On those assumptions the total population of Qatar would, by 1975, be in the region of 170,000. This figure was mentioned as the total population of Qatar by a government official in 1973, so our estimates err on the conservative side.³⁷ Table 3.25 shows these results and also that between 1970 and 1975 the Qatari share of the total population fell from 40% to 31%. If the same "crude" participation rate holds for 1975 as in 1970, then the number of active Qataris rises to 9,500 approximately, and for non-Qataris to 71,300 approximately. Outnumbered in the workforce in 1970 by five to one, in 1975 Qataris are outnumbered by seven to one.

The non-Qatari age distribution is very similar to the non-Kuwaiti one; there is a general absence of those aged less than twenty years, and persons of more than 49 years. On Table 3.24 it is clear that there are considerably fewer women than men, particularly of working age. There are 8,492 women aged between 15 and 59, and 39,336 men of that age.

Fig. 3·6 AGE SEX POPULATION PYRAMID OF QATARIS AND NON QATARIS IN 1971



Source: Census 1970, Qatar, Table 10

TABLE 3.25. POPULATION AND WORKFORCE OF QATAR, 1970 AND 1975,
BY NATIONALITY.

<u>Nationality</u>	<u>1970</u>	<u>1975 (estimate)</u>
<u>QATARI</u>		
Total Population	45,039	52,721
Qatari share of total population	40.5%	31.0%
Number of active persons	8,168	9,561
Crude Participation Rate	18.1%	18.1%
<u>NON-QATARI</u>		
Total Population	66,094	117,279
Non-Qatari share of total population	59.25%	69.0%
Number of active persons	40,222	71,371
Crude Participation Rate	60.8%	60.8%
Overall Total	111,153	170,000
<u>Source:</u> 1970: <u>Census 1970</u> , Qatar. 1975: estimate.		

The explanation of the non-Qatari presence in Qatar is almost exclusively the employment opportunities. Unlike Kuwait, which has shown sympathy to the Palestinian cause, and is geographically close to Iran and Iraq, and is relatively accessible by land or sea, Qatar plays a less active part in Middle East politics, and is more difficult to reach than Kuwait. The Jordanian and Palestinian community is small compared with that in Kuwait, as is the entire "Northern Arab" contingent, as Table 3.26 shows. There is a much larger proportion of Iranians, Pakistanis and Indians than in Kuwait. There is a significant Saudi Arabian and Yemeni³⁸ community, which may reflect Qatar's close political and religious³⁹ links with these two countries.

The overall level of illiteracy is very high for both Qataris (67.2% illiterate in 1970) and non-Qataris (65.1% illiterate) (see Table 3.27). There is a very sharp decline in illiteracy amongst those Qataris aged 15-19 in 1970. Only 21.8% of these Qataris are illiterate, and this is a reflection of the fact that it is this age group which was the first to be schooled as formal education began in Qatar in 1956 for boys, and in 1957 for girls.⁴⁰

TABLE 3.26. NON-QATARI COMMUNITY BY NATIONALITY AND SHARE OF THE TOTAL.

<u>Nationality</u>	<u>Total Number</u>	<u>% Share</u>
United Arab Emirates	2243	3.8
Omani	3271	4.9
Palestinian	5664	8.3
Jordanian	4119	6.2
Egyptian	1375	2.0
Iranian	20843	31.5
Indian	3647	5.5
Saudi Arabian	2042	3.0
Yemeni	2285	3.4
Iraqi	100	0.2
Pakistani	177076	25.8
Others	3629	5.4
Total	66094	100.0

Source: 1970 Census, Qatar, Table 4.

Whilst most non-Qataris are illiterate, a significant number (17,031 persons) are at least literate, and of these, 6,188 non-Qataris had a secondary education or more, and 1,489 had a University degree. Only 930 Qataris had a secondary education or more and 80 had a University degree.

The Census data is not presented by sex, but it is thought that the educational attainment of Qatari women is well below that of Qatari men. However, Qatari girls are enrolled in schools almost as completely as Qatari men. It is possible that educating Qatari women will have far reaching and unforeseen consequences in Qatari society.

Conclusion

Compared with Kuwait, Qatar's population is small; roughly one seventh of Kuwait's total. In 1935 the Qatari share of this total was probably less than 40%. Most Qataris are less than fifteen years old, and the share of those less than fifteen is rapidly increasing as a result of Qatar's high birth rate and good health facilities. The Qatari population is poorly educated, but the rapid expansion in education facilities over the last twenty years is altering that situation.

The non-Qatari community is largely composed of single males of working age, many of whom are illiterate. The Persian, Indian and Pakistani communities account for 63% of the total. Qatar's expatriate catchment area is distinctly further south and east of Kuwait's.

In the light of Qatar's wish to modernise the state and create an industrial sector, it seems inevitable that many more expatriates will be required in Qatar. It seems likely that Qataris, with their small number in absolute terms, will experience the same social problems which now face Kuwait in relation to the expatriate community; these problems may be even more serious in Qatar than they are in Kuwait.

TABLE 3.27. PROPORTION OF ILLITERATES BY NATIONALITY (QATARI AND NON-QATARI) AND BY AGE.

<u>Age Cohort.</u>	<u>QATARIS</u>		<u>NON-QATARIS</u>		
	<u>No. of Illiterates</u>	<u>% of Total Population in Age Cohort</u>	<u>Total Population</u>	<u>No. of Illiterates</u>	<u>% of Total Population in Age Cohort</u>
15-19	844	21.8	3863	3211	59.2
20-29	2786	57.4	4851	12268	64.5
30-39	3911	81.0	4828	9534	65.1
40-49	3025	86.0	3517	4315	66.0
50-59	1847	85.2	2167	1639	72.6
60-74	1660	90.6	1832	721	83.7
75+	371	88.5	419	86	89.5
Totals	14444	67.2	21477	31774	65.1
					5423
					19001
					14634
					6535
					2255
					861
					96
					48805

Source: 1970 Census, Qatar, Table 9.

References:

1. Lorimer, J.G., Gazetteer of the Persian Gulf, Geographical and Statistical, Volume 2, Calcutta, 1908.
2. Freeth, Z., Kuwait was my home, London, 1956.
3. Ibid.
4. The "crude death rate" is an expression of the number of deaths in a population in one year per 1000 persons in the population concerned.
5. Planning Board, Statistical Yearbook of Kuwait, 1974, August, 1974.
6. For an example, see 'Demographic Situation in Kuwait', First Regional Population Conference, Beirut, Lebanon, March, 1974, ECWA/POP. CON. I/SP. 5/E., where these figures are cited unquestioningly.
7. Hill, A.G., 'The Gulf States: Petroleum and Population Growth' (ed.) W.G. Fisher, Populations of the Middle East, p.254.
8. Abstracted from: Planning Board, 1970 Census, Kuwait, Table 7, p.16 (Arabic)
9. The prevalence of tuberculosis and the other diseases is recorded in: Planning Board, Statistical Abstract 1974, Kuwait, Table 30, p.57.
10. United Nations, World Demographic Yearbook, 1967, Table 2, p.98, New York.
11. For an exposition of their use and a compilation of the Multipliers themselves, see Werdelin, I., Demographic Statistics for Educational Planning and Administration, Regional Centre for Educational Planning and Administration in the Arab Countries, Beirut, Lebanon, 1971, Chapter 8, pp. 198-202.
12. Ministry of Labour and Social Affairs, Mimeographed Table of Number of non-Kuwaitis granted Citizenship by Former Nationality and Sex, 1961-1973/4.
13. In Appendix II, the basis for this view is outlined, and several estimates made by different bodies are quoted, all of which suggest that the 1970 Census recorded a smaller number of non-Kuwaitis than there actually were in Kuwait.
14. Ministry of Education, Annual Yearbook, 1969/70, p.144 (Arabic).

15. In Appendix II, Table 3.21 shows a very considerable discrepancy between net arrivals statistics and the 1970 population of Iraqis. It is thought that there are many more Iraqis in Kuwait than the 1970 Census enumerated, and that they are mostly single men. If the estimate of Table 3.16 for the "corrected number of Iraqis" is accepted, then the distribution of Iraqis by age would be half way between the Syrian and Egyptian distribution and the Iranian one.
16. Planning Board, Central Statistical Office, An Estimate of the Population from the Sample, May 1973, Kuwait (Arabic).
17. Planning Board, Central Statistical Office, The Statistics of Manpower from the Sample in the State of Kuwait, April 1973. Kuwait (Arabic).
18. This problem is recognised as a common one in United Nations, Population Studies No.25, op.cit., p.11, para. 72.
19. This method is outlined in United Nations, Population Studies No.25, in paragraphs nos. 230-244. It consists in determining the overall level of mortality in one census year, and estimating the population for particular age groups five or ten years previous by inflating the later figure by the reciprocal of the probability of survival for the relevant age groups.
20. This is the official United Nations method of smoothing populations where age reporting is thought to be inaccurate. See: United Nations, Population Studies No.25, para. 77, p.12.
21. In a study made on behalf of the government by the Stanford Research Institute, reference is made to an additional number of unofficial immigrants that are estimated as being between 30,000 and 60,000 persons.
22. Colin Buchanan and Partners, Studies for a Physical Master Plan for the State of Kuwait, First Estimate of Population and Employment Growth, 1969-1990, Technical Paper 3, April 1969, Table 5, p.12.
23. For a fuller account of the geography of Bahrain, see: Belgrave, J.H.D., Welcome to Bahrain, Auguston Press, 1970, p.7.
24. In Rumaihi, M., Social Development of Bahrain, Ph.D. Thesis, Durham University, 1973, a full account is given of the several alternative origins of the people of Bahrain.
25. Statistical Bureau, Statistical Abstract 1972, Bahrain 1973, Table 5, p.9.
26. Ibid.
27. Compiled from: Statistical Bureau, Census 1971, Bahrain, Form No.5, p.xxiii.

28. Ibid.
29. This method was used in Werdelin, I., Lindgren-Hooker, B., Sousou, J., On an Educational Plan for Bahrain, Regional Centre, Beirut, Lebanon 1972, and on p.3. mentions this calculation.
30. A more complete account of the Geography of Qatar is found in Qatar into the Seventies, Information Dept., State of Qatar, pps. 1 - 3.
31. Ibid., p.42.
32. The Royal Institute of International Affairs, The Middle East, A Political and Economic Survey, 1950.
33. Qatar into the Seventies, op.cit., p.49.
34. See Table 22 for the full results by Nationality and Sex.
35. See Table 3 for comparison with Kuwait.
36. In the case of Kuwait, we noted an increase in life expectancy roughly thirty years ago. However, oil was discovered in Kuwait ten years before it was in Qatar.
37. Guardian, Qatar Supplement, 22,1.73, p.19.
38. The Census does not specify whether the Yemeni community is composed of persons from the Yemen Arab Republic or the Peoples Democratic Republic of Yemen. It is thought extremely unlikely that there are many from the latter country, and that the figures refer to citizens of the former.
39. The Qataris are mostly Sunni Moslems of the strict Whahabi Sect. Most Saudi Arabians belong to this Sect also.
40. Ministry of Education, Qatar, Annual Report 1970/71, 'The Development of Education', p.51 (Arabic).

CHAPTER 4.ECONOMIC DEVELOPMENT AND THE LABOUR MARKETIntroduction

In this chapter we examine economic development and, as far as is possible, the labour market in each country. Both these topics are studied with the development of human resources in mind.

The main argument of the chapter is contained in those parts which deal with Kuwait and Bahrain, though many details of Qatar's development are significant to our study. It may appear to the reader that at times an excessive amount of attention is paid to small details, official statements or even hearsay. However, it should be remembered that these are small countries which do not have the same institutions as developed countries, where change is rapid, and where the influence of leading families in the community on government policy is considerable.

Kuwait's objectives emerge as four-fold: to maximise the financial wealth of her citizens now and in the future; to provide a high standard of social services for all who live in Kuwait; to diversify her economy so that it does not depend so heavily on oil revenues; and to reduce the economy's dependence on expatriate assistance.

There are several constraints on the Kuwaiti government in achieving their objectives. First, there is the continuing problem of the social discount rate: knowing how to trade off future benefits against present ones. More serious is the constraint presented by the ability of Kuwaiti citizens to fulfill the aims of the government, and their willingness to do the same. The former can only be ameliorated by training and experience, the latter can only be experienced by ensuring

that the relative rewards for different jobs are appropriate. Another problem is that the objective of diversifying the economy to achieve independence from oil revenues may conflict with independence of expatriate assistance. Similarly, providing a high standard of social services for all who live in Kuwait may conflict with the objective of ensuring a high standard of living for Kuwaitis. Exactly how the government has set about achieving its objectives, the nature of the trade-offs between different objectives, and the constraints which have been experienced are dealt with in Part I of the chapter.

Bahrain's objectives are more straightforward: the development of the economy to ensure a continuing livelihood for Bahrainis after her oil reserves are completely exhausted. She is constrained principally by a lack of capital resources. Endowed with the most skilled workforce in the Gulf, and a central position there, her economy is diversifying rapidly, as we see in Part II.

Qatar's objectives are similar to those of Kuwait, and principally include maximising the financial wealth of Qataris, establishing a reasonable level of social services for all those living in Qatar, and diversifying the economy away from its present dependence on oil. She is constrained by the number of citizens she has, and has overcome this problem by importing labour. The government has yet to indicate its priorities between objectives, and the pattern of development that we examine in Part III suggests that she will be obliged to do this in the not too distant future.

PART IKUWAIT.

Kuwait began her development as a "modern state" when oil revenues were first received in 1946. Since then, "oil" has dominated the economy: almost all economic activity is related to its extraction and sale.

Initially, Kuwait, like most other developing countries, saw the improvement of the living standard of her people as the main purpose of economic development. By about 1965 her oil revenues had enabled her to achieve a standard of living comparable with any European country, and by some measures, a higher one. As a result, the more recent aim of her economic development has been to assure this standard of living by diversifying sources of income away from solely the sale of crude oil. Industrial development, using Kuwait's cheap natural gas and relatively abundant capital, is at present the principal vehicle being used to achieve this aim. But the high economic, social and possibly political costs involved in the necessary importation of expatriate labour to staff this development has moderated support for it.

4.1. Characteristics of Economic Development

a) Economic conditions in the "pre-oil" era.

Although oil was first discovered in commercial quantities in 1932 in Kuwait, the development of the infrastructure required to extract oil was impeded by the Second World War, and it was not until 1946 that oil was first exported.¹ In 1946² Kuwait Oil Company (K.O.C.) paid the first "oil revenue" to the Emir of Kuwait's private account. The revenues in the early years were relatively small. By 1950 the revenues were becoming sizeable, and it is from that time that our "post oil" era begins, and lasts until 1973.

In the "pre-oil" era, there were four activities from which the majority of the population gained a livelihood: pearling; trading; fishing; boat building. Economic life was, up to the First World War, prospering in Kuwait. The price paid for pearls was high, and abundant trading opportunities existed both in the traditional forms including gold smuggling, and in a new and lucrative trade, arms dealing.³ Kuwait's position in the Gulf, with access to Saudi Arabia, the Levant and Turkey contributed to the growth of this trade. Fishing probably described the livelihood of most of the population, especially when the pearling season was over.⁴ Boat building, for which Kuwait was and is renowned, is the only one of the four to have survived in any recognisable form. However it now provides a living for possibly only fifty men.

Kuwait's success in supplying arms to Turkey during the First World War contributed to her economic depression after it. Perturbed by this activity the Royal Navy in 1916 blockaded Kuwait, and trade collapsed. This blockade was followed with one by Saud, similarly concerned that his opposition was able to receive supplies through Kuwait. The effect on the economic life of Kuwait was serious. To compound Kuwait's difficulties the Japanese cultured pearl came on

to the market in the 1920's, and the demand for the expensive Gulf pearl diminished. From the First World War to 1930 Kuwait experienced, by her own modest standards, a time of severe economic depression. It was during this time (1920-1930) that the school initiated by Sheikh Mubarak for merchants' children collapsed through lack of support (see Chapter 6). The Second World War acted in its turn as a restraint on any economic recovery there might have been, and it was not until 1946 that Kuwait's situation began to improve materially. Without the discovery of oil, and its extraction by K.O.C., Kuwait's future was, in economic terms, bleak; with a small population, few mineral resources besides oil, and with the small amount of capital there was lying in the hands of a number of merchants with little inclination to invest in Kuwait. The climate is harsh, and there is very little fresh water in Kuwait. The inhabitants of Kuwait city were obliged to rely on imported water from Iraq, brought in expensively by dhow. The lack of water and vegetation, combined with the fierce heat, meant that agriculture was almost non-existent.

b) Transition to Modern Statehood, the first "post-oil era", 1950-1973.

By 1950 oil revenues paid by K.O.C. were sizeable, and had begun to be distributed and used to develop social services. In 1948 a large water distillation plant was commissioned, which began operating in 1950. This unit, with a capacity of one million gallons a day (m.g.d.) provided as much water as the population required until 1957, when a second plant was commissioned. Schools, hospitals and "clinics" were built in increasing numbers, and the "social demand" for their services grew. Between 1950 and 1960 the main aim of Kuwait's development policy was to maximise the welfare of the population by providing goods and services, either free or for a nominal price.

However from 1960 onwards (1961 was the year of formal independence) Kuwait assumed more ambitious aims, and indications of this are showing in the creation of the Planning Board and the Kuwait Fund for Arab Economic Development in 1962. Also about then some small scale industrial activity commenced in areas where import substitution was possible.

c) Growth of Oil Revenue.

After relatively small payments to the government in 1946-1948 by K.O.C. revenue increased dramatically from 1950 to 1955. Increases in revenue were only as spectacular again from 1970 to 1975, when they increased seven-fold from a very large initial sum. Table 4.1. shows oil revenue and oil production for selected years.

TABLE 4.1. OIL REVENUES OF KUWAIT (IN K.D. 000's) AND OUTPUT (BARRELS/DAY, AVERAGE).

<u>Year</u>	<u>Amount</u> (K.D.000's)	<u>Production</u> (b/day)
1951/52	6,343	344,445
1955/56	100,498	1,103,639
1960/61	158,606	1,701,796
1965/66	225,326	2,359,628
1970/71	280,440	2,987,961
1973/74	543,900	3,020,452
1974/75	2,028,900	2,550,000

Notes: (1) Before 1965/66, revenues quoted in sterling. After that time in K.D.

Source: 1950/51 to 1970/71: Al-Kuwati, 1974, op.cit., p.298 and 295.
1973/74 and 1974/75: Central Bank, Annual Report 1974/75, p.34.

The sharp increase in revenue from 1970/71 to 1974/75, a time of falling output, reflects the improved government "take" per barrel. Kuwait's Central Bank estimates that in 1970/71 the government received \$ 1.3 p.b., but by 1st November 1974 this had risen to \$ 9.5 p.b. Although the price of crude oil rose dramatically in November 1973, there had been several agreements prior to that time when the price, and crucially the government take, was raised from 1970 levels,

principally the Geneva (1972) and Tehran (1973)⁵ agreements. Because of the nationalisation of oil companies after 1973, the government take per barrel has increased to its current level of approximately \$ 11. Even allowing for inflation and revaluation of the Dinar the increase, as we noted before, is considerable.

By 1965 Kuwait had achieved a level of Gross National Product per capita of \$ 4487, which was unrivalled in the world. If that measure were made for Kuwait citizens only, and not for the total population it would more than double. In 1975 the Union Bank of Switzerland estimated that Kuwait had again risen to the top of the G.N.P. per capita polls, with \$ 11,000 per capita.⁶ G.N.P. per capita is not a good indication of the economic development, but it does help to understand the scale of Kuwait's (financial) wealth, relative to her population.

Four oil companies have been involved in discovering and extracting Kuwait's oil. The principal company was Kuwait Oil Company, which, until its recent nationalisation, accounted for 90% of Kuwait's crude oil production. The concession to extract oil was first granted in 1934, and included the area of Kuwait proper. The American Oil Company (Amin Oil) was granted in 1948 the concession to "explore, produce and utilise" the oil in the "Neutral Zone", an area shared with Saudi Arabia, to the south of Kuwait. The Arabian Oil Company was the concessionary for the waters offshore of the Neutral Zone, from 1959. Involved to a lesser extent than these three was Kuwait Shell Petroleum Company, which in 1961 was given the concession for offshore exploration, north of the Neutral Zone, but in 1964, before oil was found, political disturbances halted K.S.P.C.'s operation.

Today Kuwait faces the problem of how best to maximise the benefits from the oil she has. Her reserves, estimated in 1974 at 64,000 million barrels, are sufficient to provide 61 years oil at 3 m.b.d.⁷ The issue is a complicated one, and hinges on such variables as the future price of oil and the rate of world inflation, both unknowns. Also related is the value to Kuwait of having a cheap source of energy as opposed to funds (paper assets) which may yield a sufficient income to buy energy. Putting Kuwait's point of view, the Chairman of the Kuwait Fund for Arab Economic Development said:

"After all, our oil income is not an income. Our oil revenue is a liquidated capital. Our only capital is oil, and we sell oil in return for practically worthless money, bearing in mind inflation".⁸

He might have added to "inflation", "devaluation" and "nationalisations". Without becoming involved in the complicated issue of Arab marketing strategy for oil, and the interdependence of Arab economies and the West, we might note that Kuwait has chosen to limit oil production to 3 m.b.d. by law (1973), and is very concerned to create non-oil sources of income. In 1975 government revenue was expected to be \$ 13 billion,⁹ and Kuwait manages to spend approximately 45% at home and abroad.¹⁰ Another important point is that Kuwait is known to have very large "unproven" reserves. With a current share of 10.5% of the world's "proven" reserves, Kuwait retains a key role in O.P.E.C., and to a lesser extent in the world's economic stage.

d) Allocation of Revenues.

When oil was discovered, Kuwait was a small community of merchants, governed by an Emir. In Kuwait the oil companies negotiated directly with the Emir, as was the practice throughout the Gulf. It was consistent that the ruler should receive the benefit of an agreement he had negotiated and which he signed. For that reason, K.O.C. initially paid the Emir personally the entire sum of oil revenue.

In Kuwait, the transition from this state of affairs to one where there was a recognisable government with a budget was remarkably rapid in comparison with the time taken for Bahrain or Qatar to make the same changes. Kuwait's budget records date from 1952, as do many of her statistical records, including the large body of her educational ones. From 1952 state revenue was derived almost exclusively from royalties and revenues paid by oil companies, as Table 4.2. shows:

TABLE 4.2. SOURCE OF GOVERNMENT REVENUE, 1952/53 - 1970/71 IN K.D. 000's.

Oil Revenue	3,197,568	91.8%
Others	282,453	8.2%
Total	3,480,021	100.0%

Source: Al-Kuwari, 1974, op.cit., p.130.

The State Revenues were distributed between four main items: State Reserve, Ruling Family, Land Purchase Scheme, Budget. This pattern is found in most Gulf States. The State Reserve is a fund of long-term investments, designed to generate an oil replacing income. In fact, allocations to this fund have fluctuated and when deficits arose in other spheres, State Reserve allocations were absorbed elsewhere. In 1972 however, the National Assembly passed a law stipulating a minimum allocation to the State Reserve per year. Until 1964, the State Reserve was held in the Emir's own name. In that year though, he turned these funds over to the "Government". To compensate the Ruling Family for the loss of the revenue from oil, they receive a nominal sum each year. In 1966 this sum was K.D. 8m., and has remained the same since then.

The "Land Purchase Scheme" was a curious method of instant disbursement of oil wealth from the government to Kuwaiti citizens. The land or houses which Kuwaitis owned were purchased at inflated prices, and resold for nominal sums back to the proprietors. This exchange might happen several times over a few years. The value of

this somewhat bizarre method of income distribution was that it redistributed wealth more quickly than a bureaucratic organisation could have done. In fact, in the early days, no suitable organisation existed to do this. The disadvantages of this technique were, and still are, considerable. It tended to make those Kuwaitis already wealthy (property holders, merchants, etc.) more so. The accumulated capital gained through the land purchase scheme tended to be channelled abroad into foreign currencies, or into property speculation in Kuwait. The effect on Kuwait's inflation was considerable and particularly so for house rents. Between 1965 and 1969, the Land Purchase Scheme was reduced somewhat. However, after 1969 it recommenced again with a considerable budget. (See Table 4.47 in the Appendix). Partly as a result of the Land Purchase Scheme, house rents in Kuwait between 1974 and 1976 increased approximately three-fold.

The "Budget" distinguishes between "capital" and "current" expenditures. Capital expenditures tended to be used for infra-structural investment: roads, schools, hospitals, utilities. Current expenditures were accounted for mostly by "education" and "health" items and wages and salaries are responsible for a sizeable proportion of all current expenditure.¹¹

Table 4.3. shows the distribution of government expenditures over the twenty-one year period, 1950 to 1970.¹²

TABLE 4.3. DIVISION OF GOVERNMENT EXPENDITURE, 1950-1970.

<u>Expenditure</u>	<u>Amount in K.D. m.</u>	
Current	1,748	56.0
Capital	588	18.9
Land Purchase	697	22.3
Ruling Family	87	2.8
Total	3,120	100.0

Source: Al-Kuwari, 1974, op.cit.,

Curiously for a developing country, current expenditure has accounted for three times capital expenditure. While there have been very high levels of investment in infrastructure, schools and hospitals, it appears that the current account has been swollen by large payments to government employees and transfer payments to other Arab States.

Table 4.48 in the Appendix shows that up to 1970, "Current Expenditure" had begun to absorb three-quarters of total government spending. The rapid decline in the Land Purchase Scheme expenditure after 1967 is also evident. By 1974 the current expenditures share had risen to 84 per cent of the total, but in the following year it fell to 66 per cent while the "capital" allocation rose from 12 per cent to 27 per cent from 1974 to 1975. This reversal of trends probably reflects a decision to make smaller payments to "front line" Arab States, and to concentrate more on internal development. By 1974 payments to those countries had risen to K.D. 299 m. and accounted for 35 per cent of all government expenditure.¹³

We have already seen that oil receipts account for more than 90 per cent of government revenue, and it is likely to do so for many years to come. Table 4.49 (Appendix) compares government spending with government revenue from 1964/65 to 1975/76. We can distinguish between two periods in fiscal terms. First 1964/65 to 1969/70, and second, 1970/71 to 1975/76. In the first period, Kuwait experienced either relatively small budget surpluses or deficits. 1966/67 and 1967/68 were years of budget deficit, in total K.D. 46.2 m., 8 per cent of all government revenue in those years. Over the entire period she experienced a small surplus of K.D. 22.4 m., about 1 per cent of total revenue. An appraisal of Kuwait's economy made early in 1970 which took into account the nature of government spending, and particularly the low level of capital formation, might have been somewhat pessimistic. In this period Kuwait would definitely not be

characterised as "a surplus economy" without financial constraints to development, as has been suggested.¹⁴

From 1970 to 1974 the government take per barrel improved considerably, output increased generally, and government revenues increased seven-fold. In fiscal year 1974/75 Kuwait was only spending 34 per cent of her revenue, most of the surplus being placed in the State Reserve Fund. The following year the same proportion had risen to 40 per cent. In this period of Kuwait's fiscal history she can more accurately be characterised as a "surplus economy", whose main problem is improving absorptive capacity and investing surpluses productively. Moreover, in 1975/76 investment income was equal, in money terms, to the entire government revenue of 1968/69. However there are several reasons to think that this period of surplus may not last forever, as Kuwaitis themselves are well aware. The price of oil seems to be set now at approximately \$ 11 ~~per barrel~~, and by law and convention, output seems set at about 2.5 - 3.0 m. barrels per day. So government oil revenue seems to be likely to remain at around its present level. The State Reserve appears to be yielding progressively more each year, and remains a somewhat uncertain variable. On the other hand government expenditure seems bound to rise, as Kuwait becomes an institutional international aid donor, as the demands of government employees for higher wages persist,¹⁶ as the cost of social services mounts, and as inflation continues at very high levels. Already the government is involved in paying food subsidies to hold down market prices, to the extent of K.D. 40 m. (5% of current expenditure) in 1974.¹⁵

Despite Kuwait's current surplus of financial wealth, and her ever increasing State Reserve, the demands on her wealth may well

continue to increase relatively more quickly than the rate at which she is able to create it. The implications of this for our study are that while Kuwait may appear to be relatively unconstrained in the short term by finance, in the slightly long term (a view which the government must take) she does experience such a constraint. Hence the government should make her investments in human resources with some care to ensure that a reasonable yield is derived from them.

e) Economic conditions 1950-1973.

For Kuwait, the first "post-oil" era runs from 1950-1973. In the first half of this period, considerable investments were made in infrastructure, utilities and social services.

From 1960 onwards, there was a growing domestic market, large enough to support some small scale industry, and a number were started. In 1962 the Planning Board was inaugurated and this signalled a government concern that Kuwait should develop into more than a welfare state. The development of fertilizers and a petrochemical industry, which began then, also reflected this sentiment.

Non-oil economic activities were principally construction, commerce, importing and re-exporting. The construction sector, consistently prominent, checked only briefly in 1967 and 1968.¹⁶ The considerable spending capacity of the population of Kuwait led to a very substantial "import-export" trade. Again, the more prosperous merchants tended to benefit more than the population at large. Commercial Law Fifteen of 1960 insists on a 51% holding by Kuwaitis in the equity of every business, and has ensured a strong Kuwaiti control of commercial activity. Oil revenues, as we have seen, were continually increasing, and apart from the 1967 war in the Middle East, there was little to impede the pace of Kuwait's development. By 1973 the economy was still highly dependent upon oil, both as a source of

revenue and a creator of G.D.P., though by then a sizeable "mixed" industrial sector had developed as well as some small industries that were orientated towards the consumer.

f) Sectoral Origins of G.D.P.

The contribution of "Crude Petroleum, Natural Gas and Other Mining and Quarrying" to G.D.P. dominates that of all other sectors. Its share increased from 56 per cent in 1968/69 to 64 per cent in 1971/72 (Table 4.50) and in 1976 would probably be higher still.

Collectively, "Public Administration and Defence" and "Services" accounted for 12 per cent of G.D.P. in 1971/72, the next largest group after "Crude Petroleum, etc.". Much of the "value added" in these sectors is the result of government activities, which in turn rely on the export of oil for funds. We could include in a list of sectors dependent on "Crude Petroleum, etc." not only "Public Administration" and "Defence" and "Services", but also "Banking" and "Wholesale and Retail Trade" (8 per cent of G.D.P. in 1970/71).¹⁷

An assessment of Kuwait's economy must recognise that it was in 1971 highly dependent on oil, and still is today. The "Manufacturing" sector accounted for 3 per cent of G.D.P. in 1970/71, but a caveat should be entered that a great number of industrial enterprises are highly subsidised by the government. They receive free or cheap land, water, electricity and other power. Moreover, public sector debts are occasionally written off in a year of low profits, and in most sectors some trade protection exists.

The "value added" approach to National Income accounting is, by itself, not very useful when trying to illustrate the dependence of the economy on its main resource, oil. Nonetheless, that point does emerge from an analysis of G.D.P. by sector, and it has encouraged the creation of a strategy of economic development through

industrialisation, which we now consider in more detail.

g) Development Strategy.

Kuwait's economic development has been built upon the sale of oil, and activities associated with, and dependent upon it. Initially, "development" consisted almost exclusively of investment in social overhead capital and social services. By 1960 there was some concern over Kuwait's dependence on oil, as this resource is non-replenishable, and has a value dependent on relative world demand and supply, and the availability of substitutes. In the long run, there are substitutes for oil as an energy source. This led to attempts to diversify sources of income into non-oil or oil-related activities. In 1965 the Industries Act strongly encouraged industrial activity, offering industry tariff protection, cheap water and power, and minimal taxation. The preamble to the 1967/72 Five Year Plan explicitly states Kuwait's intention to "industrialise".¹⁸ Several industries have developed in the "mixed sector" (part government, part private), using side products of existing industrial activities, including a fertilizer industry (sulphur from the refinery) and a chemicals plant (which uses the salt extracted in water distillation). From 1965 onwards, the essential determinants of Kuwait's development strategy were an appreciation of her considerable endowment of capital, and a comparative advantage for manufacturing activity in possessing a cheap energy source: large unused quantities of natural gas. From 1973 onwards, development has concentrated on industries which are able to use these two factors. In that year, an Industrial Bank was set up to encourage "non-oil" industrial activity, as the International Bank for Reconstruction and Development had suggested.¹⁸ In 1974, a United Nations Industrial Development Organisation team were considering the implementation of some of the 1,000 industries that had been proposed by government consultants. Significantly, industries such as an

Aluminium Smelter and a Steel Mill were considered, which are energy intensive and capital intensive, and not directly related to oil.

If a current "economic strategy" is identifiable, it would be "development through industrialisation". It should be said that so far industrial activity has tended to be ad hoc, and has not followed either a Plan or a consistent policy.

h) Industrial Development.

The general contours of the development of Kuwait's industrial sector have already been stated. In 1963 the Census of Industries showed that the "industrial sector" mostly consisted of "Repairing" firms, "Tile and Mosaic" and "Metal Product" manufacturers. At that time there was no "export orientated" activity, and establishments with less than five workers accounted for 29% of all manufacturing employment.²⁰ By 1966, a sizeable "mixed sector"²¹ had developed. As a result of the larger scale of mixed sector industries, the size of establishments measured by employment, had risen. By 1966 employment in establishments with less than 5 workers accounted for only 21% of all manufacturing employment.²²

Table 4.51 in the Appendix gives some salient details of the development of the mixed sector industries. Of the ten (or so) industrial companies in the "mixed sector", five are concerned solely with the construction sector, one is concerned with food, and two Kuwait National Petroleum Company, (K.N.P.C.) and Kuwait Petroleum Company (K.P.C.), are concerned with refining and petrochemicals. The Kuwait Chemical Fertilizer Company is based on a by-product of oil refining - sulphur.

The "mixed sector" is considerably larger than private industry in terms of fixed assets, and is smaller than the oil industry on the same measure. If, however, employment is used to rank the three

sectors, then the private sector is the most important. Table 4.4. shows this for 1970.

TABLE 4.4. EMPLOYMENT AND FIXED ASSETS IN THE INDUSTRIAL
(K.D. 000's).

<u>Sector</u>	<u>Value of</u> <u>Fixed Assets</u>	<u>%</u>	<u>Number of</u> <u>Employees</u>	<u>%</u>
Private	6,794	4.1	6,804	40.0
Mixed	66,835	40.6	4,681	26.8
Oil	99,747	55.3	5,964	34.2
Total	164,376	100.0	17,449	100.0

Source: Ministry of Commerce and Industry, Strategy and Prospects for Industrial Development in Kuwait, Table 14, p.19.
(Tripoli, April 1974) (Arabic).

Companies who wish to set up in an industrial activity in Kuwait must, according to the 1965 Industries Act, obtain a licence to do so from the Ministry of Commerce and Industry. In this way the government is able to control industry and the allocation of space in the industrial area (Shuaiba). In 1974, the Ministry of Commerce and Industry released two sets of figures. One of them dealt with industrial projects orientated to the consumer market in Kuwait, which were proposed for the next five years. The total investment involved was K.D. 66.5 m. and additional operating employment was 5,450 persons, as Table 4.52 in the Appendix shows.

The second set of Ministry of Commerce figures outlined the proposed "export orientated" ventures. Some of these industries are related to oil; all of them use natural gas as a cheap fuel for the processes. Table 4.53 (Appendix) shows that the total anticipated investment is K.D. 285 m., and additional operating employment is 5,050 persons. Taken together, export and consumer orientated projects will involve an investment of approximately K.D. 350 m. This would represent 230% of Gross Fixed Capital Formation in 1972/73 and 28% of National Income in the same year.²³ Clearly this venture would represent investment in industrial activity on a previously unknown scale for Kuwait. The additional jobs which it is estimated these projects will

generate would represent 33% of all jobs in the manufacturing sector in 1970. Not mentioned in those figures, but equally important, is the additional investment and employment which will inevitably be required to support these ventures.

Government thinking over industrialisation has modified recently. After extensive debate, the Steel Mill project, already in an advanced state of planning, was cancelled. A government spokesman gave as the reason for this decision, the "excessive number of expatriate workers" the project would require.²⁴ It is difficult to fit this decision into Kuwait's policy of industrialisation but it appears to represent an amelioration of the strategy, "industrialisation at any price". If dependence on foreign workers is accepted as an important social cost, then presumably similar projects will also be affected. In November of 1976, Ali Khalifah al-Sabah, Under Secretary of the Ministry of Finance said:

"Politicians everywhere put a high premium on industrialisation per se. But the underdeveloped countries - such as Egypt, India, etc. have gone through a very bad experience in this field because the projects in question were not studied sufficiently carefully and there was an overriding drive towards industrialisation as such. The oil exporting countries have been under the same pressure ever since the oil price increases of 1973-74..... I can't imagine that Saudi Arabia, Kuwait or any other oil producing country, in a similar situation would undertake industrial projects merely for the sake of providing employment. The truth is that every additional job provided by a project will have to go to a non-national, and this will in turn entail considerable added investment in services and infrastructure..... I'd hate to see a series of white elephants draining the economies of the oil exporting countries under the guise of industrialisation".²⁵

Although the official quoted is a member of the Ministry of Finance, it would be fair to say that his view is a reflection of government thinking. Moreover, the Ministry of Finance often has the last word in these matters.

The industrial development envisaged by the Ministry of Commerce in 1974 faces a number of constraints. First, having no non-oil mineral resources, all raw materials must first be shipped to Kuwait, and re-exported to their final destination. Second, while Kuwait is well placed to export to Asia and Africa, these markets may not have sufficient foreign exchange to purchase Kuwait's industrial exports, particularly as oil imports continue to absorb a high proportion of foreign exchange earnings. Third, Kuwait does not have an indigenous supply of labour to man the variety of industrial enterprises that she plans. Not only may expatriate labour be expensive, their use will involve high social costs in terms of extra consumption of water, power and social services. Moreover, unlike physical capital, human capital is free to move, and expatriate workers may well migrate within the Gulf Region. Fourthly, the value of the output of a Steel or Aluminium Plant is dependent on the world price for that commodity. Kuwait, like every other producer, would have no control over that price (except through the price of oil). What differentiates Kuwait from more traditional Aluminium (for example) producers, is that her production will enter the world market at about the same time as the output from the seven other aluminium plants recently commissioned in the Gulf Region. It may have been a consideration of such problems which has caused the cancellation of the Steel Mill, and the apparent hesitation over the other projects.

Finance for some of the smaller projects is expected to come from the Industrial Development Bank, which was set up in 1973 with a capital of K.D. 10 m.²⁶ It is unlikely that many of the large scale projects would be directly financed by the I.D.B., given its limited capital. However, it is, at present, instrumental in arranging finance for industrial projects and its working capital was recently raised to K.D. 100 m. Traditionally, Kuwait's private sector has a surplus of savings over investment opportunities, and support for

government projects is rapid normally.

i) The Role of Government as Entrepreneur.

As the allocator of oil revenues, the government of Kuwait has a central position in Kuwait's economy. Changes in her allocations or disbursements have a significant impact on commercial and industrial life. Her substantial payments to countries involved in the 1967 War are said to have led to a mild recession in the economy, and in particular, the construction sector. Activity in this sector is more sensitive to general confidence in the stability of the country, and the region, than other sectors. Possibly the principal cause of the downturn in the economy in 1968 and 1969 was the reduced disbursements from the "Land Purchase Scheme" (see Table 4.47) at that time.

Private investment funds have not been instrumental in developing Kuwait's economy and usually have been channelled abroad, into "safe" investments like British Government Securities (though the 1967 Sterling devaluation had an effect) or into domestic housing. Concerned to create a source of income unrelated to the extraction of oil, the government has consistently encouraged institutions designed to assist industrial enterprises. The Credit Bank of 1961, the Planning Board of 1962, the Industrial Licence Committee, formed in 1965, the development of Shuaiba Industrial Estate and the Industrial Investment Bank of 1973 are illustrative of their efforts. Commercial and Banking laws, which restrict ownership of companies by any foreign person or corporation to 49% have ensured that business interests remain firmly in Kuwaiti hands. However, perhaps this is one area where government intervention has been, in the long run, detrimental. Kuwait does not have an international banking centre as do other Gulf States such as Bahrain and Dubai.

Determined though the government is to direct economic development, it has experienced many of the problems common to countries that develop rapidly and without the institutional supports found in developed countries. Moreover, an additional problem is uncertainty over exactly what its long term aims are. This last problem is fundamental, and its roots lie in the origins of Kuwait. However, given the immediate objective of creating an alternative source of income to oil revenues, the government has made a purposeful start. The contradictions between a policy of industrialisation and Kuwait's other long term aims, including the government's concern that Kuwaiti affairs should remain in her own hands, has resulted in an occasional appearance of indecision.

4.2. Future Development.

a) Development Options.

We can distinguish between three different paths of economic development that might be taken. A consideration of these will assist with an analysis of Kuwait's actual economic development.

i) The Rentier State.

We have already noted the view of a Kuwaiti economist that her oil is a form of capital, which she sells to obtain an income. More simply, we could say that by selling her oil, Kuwait changes only the nature of her capital, from a mineral resource to a financial one.

It is not difficult to envisage Kuwait building up, over the next twenty to thirty years, sufficient financial capital to yield an annual income equivalent to that received from oil at present. As Kuwait has a minimum of twenty five years of oil left, and a maximum of seventy, it might be possible to create an income much larger than that enjoyed at present.

The economic consequences of a "Rentier State" for Kuwait are interesting. In its most complete form, all manufacturing activity, non-essential to Kuwait's economic life, would terminate. All refineries, except a small one to cope with domestic demand would be closed, along with the fertilizer and petrochemical plants. The sudden reduction in expatriate population would lead to a surplus of housing, and possibly schools and health clinics. The lack of demand for the output of construction industry products would lead to the closure of the many associated industries. Eventually, the only remaining "industrial" type of activities left would be those connected to utilities and food manufacture.

It would be the aim of the government to become completely self-sufficient in manpower, and policies designed to achieve that end would

be affected. The government would set the salaries of key personnel at premium rates, and pay only moderate rates for professions which had an over-supply, like administrative assistants with University Arts Degrees. All Kuwaitis would be employed by the government and would be paid by the funds which invested capital earned.

The advantages to Kuwait of the "Rentier State" are considerable. First, if Kuwait's main aim is to achieve a high standard of living for the people, which implicitly it seems to be, then this aim is fulfilled. Second, the main productive activity would be investing each year's oil revenue. Kuwait became wealthy in the nineteenth century through the trading activities of her merchants, and this activity is similar. Thirdly, Kuwait would be largely independent of expatriate labour, and all the associated problems.

The simplest calculation shows that the returns to Kuwait for investing her oil revenue abroad are considerable. If she maintains the 1975/76 transfer to the State Reserve of K.D. 1,095.9 m.²⁷, and derives a real rate of interest on her investments of 3% per annum, then the interest of her paper assets would be equivalent to her oil income in 1975/76 thirty years hence.

Transfers to the State Reserve are currently at a very high level; 72% of all income in 1974/75, and an estimated 65% in 1975/76. But how much is transferred in the future will depend on the rate of expansion of Kuwait's absorptive capacity. At present this is approximately K.D. 908.6 m. per annum in 1975/76 (including foreign payments), which represents 45% of all income. In fact, Kuwait's income from the State Reserve Fund, as we have noted, is considerable, accounting in 1975/76 for 13% of all government receipts.

There are some obvious pitfalls to developing a Rentier State and these would include nationalisation of assets, devaluations and inflation. For a small investor without influence these would represent formidable problems. But for Kuwait, a diligent control over her investments, a mixed portfolio, and an active interest in the economy of the country where the investment was made, should ensure that , most of the time, these problems would be avoided, or at least minimised. In our hypothetical model, where Kuwait invests for thirty years and gains in interest today's oil income, her portfolio assets would stand, at today's prices, at K.D. 56,200 billion, roughly three times the United Kingdom Gross National Product (1975). This would be sufficient to give her some influence in the economic affairs of countries where she invested.

ii) Financial Centre.

With her enormous capital reserves, Kuwait is well placed to develop as a financial centre, concentrating on the development of banking, insurance and international finance. There are signs that this sector is developing, but most of the new "Investment Funds" are either orientated towards Kuwait, or are very small. Kuwait's Banking Laws prohibit foreign banks in Kuwait, and repealing that law would obviously be a pre-requisite for development of this activity. A problem Kuwait faces here, and this has already been mentioned, is that Bahrain, and to a lesser extent Dubai, have already established themselves as main financial centres of the Gulf. Beirut's difficulties and the smallness of Bahrain might work to Kuwait's advantage, were she to attempt to create a financial centre.

iii) Development Through Industrialisation.

Until recently it appeared that Kuwait saw her future economic development as resting principally upon a policy of diversification of sources of income, using her own cheap energy and capital.

Industrialisation via capital intensive industries largely describe the working of this strategy. However, the very high price which Kuwait has had to pay in political and social terms for uncertain economic gains has led to a degree of caution over this policy. At this time it is not possible to say if the "Steel Mill" decision heralds a new era of economic policy or not. It should be said that the industrialisation plans of Kuwait are ambitious, even without the Steel Mill.

4.3. Employment and the Labour Market.

Employment has increased in Kuwait at a rate commensurate with her economic growth. Short of both people and a skilled labour force, Kuwait has been obliged, since oil was discovered, to rely on a sizeable expatriate workforce. Over time this group has grown in absolute terms and relative to the total workforce.

A division has arisen between Kuwaitis and non-Kuwaitis, who now tend to fill different kinds of jobs, and who work on different pay scales when in similar occupations. These divisions have emerged partly because of Kuwait's odd economic development, her initial dependence on expatriate labour, and the government's use of employment as a means of distributing wealth amongst Kuwaitis.

Employment with the government is generally more rewarding than employment in the private sector, particularly amongst "blue collar" jobs. There is therefore a strong incentive for the majority of unskilled and uneducated Kuwaitis to seek employment with the government. As the government is obliged, by law, to provide a job for every Kuwaiti applicant, and most Kuwaitis do work for the government. An added incentive is the higher rates paid to Kuwaiti employees compared to non-Kuwaitis, and while the government generally pays better than the private sector, it pays Kuwaitis particularly well, even though the latter are less well qualified than their non-Kuwaiti colleagues in formal terms. As most Kuwaitis work for the government, the relative pay for different types of jobs in the government is likely to play a large part in the career choice of pupils and students.

a) Quantitative Development.

Kuwait's rapid economic development after oil was first exported, her small population and limited experience of modern sector employment

resulted initially in a dependence on a large expatriate workforce. The first Census of 1957 shows more than 57,000 non-Kuwaitis working in Kuwait, representing approximately 67% of the workforce. Between 1957 and 1970 their numbers doubled, and their overall share increased to three-quarters of the workforce, as Table 4.5. shows.

TABLE 4.5. EMPLOYMENT IN KUWAIT BY NATIONALITY AND SEX
1957, 1965 AND 1970.

<u>Nationality</u>	<u>Sex</u>	<u>1957</u>	<u>% share of total</u>	<u>1965</u>	<u>% share of total</u>	<u>1970</u>	<u>% share of total.</u>
Kuwaiti	Men	n.a.		39,163		57,610	
	Women	n.a.		1,003		2,024	
	Total	28,373	33.2	40,166	22.4	59,634	25.4
Non-Kuwaiti	Men	n.a.		131,498		160,262	
	Women	n.a.		7,620		14,458	
	Total	57,186	66.8	139,118	77.6	174,720	74.6
TOTAL		85,559	100.0	179,284	100.0	234,354	100.0

Source: Planning Board, Censuses, 1957, 1965 and 1970, Kuwait.

b) Participation.

In Chapter Three we noted that non-Kuwaitis accounted for more than one half the total population by 1970; their higher participation rate, shown on Table 4.54 in the Appendix, accounts for their greater share of the workforce. The table shows for 1970 that while most male Kuwaitis aged between 15 and 64 were economically active, only 2,022 Kuwaiti women were, 2.4% of their respective age group. A very high proportion of non-Kuwaiti men work, more than 94%, and 18% of non-Kuwaiti women do so. A familiar characteristic of Muslim societies is that there are social restrictions on women working. Normally though, women in Muslim countries may work unhindered on the land. However, Kuwait is an urban community, with a tiny agricultural sector. The number of Kuwaiti women working in 1965 was 1,003 and in 1970 it was 2,022. Table 4.55 in the Appendix gives the educational qualifications of these women. In 1965 only 29% had an Intermediate

Certificate or a higher educational qualification. By 1970 that proportion had increased to 60.6%, and included most of the extra working women. On the face of it, this appears to be strong evidence to suggest that education helps to overcome the traditional barriers to womens' employment in Kuwait.

Education appears to help overcome the traditional restriction of employment of women in several ways. Parents gradually become used to the idea of their daughters leaving home, and still returning to it each day. The qualifications girls obtain in school enable them to enter a male dominated world on the same footing as boys. Employment emerges as a side-effect to education, and not as the reason girls initially go to school. However, once the decision is taken to send a girl to school, it has begun to imply a subsequent decision ten years later.

Already non-Kuwaiti women work in Kuwait, and the phenomenon of women successfully filling jobs need not be confined to non-Kuwaitis. To some extent, education broadens the outlook of the recipient and possibly employment is seen as a more interesting alternative to domestic life immediately after school or University. For the government there is a considerable incentive to encourage Kuwaiti women to work. They represent one of the few sources of indigenous labour supply which so far have not been used.

c) Sectoral Development.

The distribution of employment by economic sector in Kuwait is not a common one. With an arid climate and little cultivable land, employment in agriculture is limited. The "oil" industry is very capital intensive, and so does not create many jobs either. The manufacturing sector is increasing in size, but here too employment is limited. The construction sector has consistently provided work for a large number, and there seems no reason to think this will alter

significantly. The "Tertiary"²⁸ sectors, and particularly "Community and Personal Services" (which includes government employment) have, at least since 1967, accounted for the majority of employment. Table 4.6. summarises Table 4.56 (in the Appendix) and shows the relative share of each group of sectors from 1957 in Census years.

TABLE 4.6. DISTRIBUTION OF EMPLOYMENT BY GROUP OF SECTORS,
1957, 1965 AND 1970.

<u>Group of Sectors.</u>	<u>1957</u>	<u>1965</u>	<u>1970</u>
Primary	7.5	5.0	4.8
Secondary	17.6	26.1	28.1
Tertiary	74.9	68.9	67.1
Total	100.0	100.0	100.0
Total Number	85,555	179,284	234,360

Source: Table 4.56, Appendix.

The table illustrates an interesting aspect of Kuwait's economic development. Usually, in economic development, "Primary" sectors develop before "Secondary" ones, which eventually diminish in significance and give way to "Tertiary" sector development. In the early part of the 20th Century, Kuwait fitted with this description in that Primary sector activities were prominent: pearling, fishing and some date cultivation. But after oil was exported, the Tertiary sectors immediately accounted for the majority of employment (but not Gross Domestic Product). Table 4.6. shows that from 1957 to 1970, the Tertiary sector's significance, in terms of employment, fell in favour of the Secondary sector, a period when conventionally it should have been increasing.

A distinction is drawn occasionally between "growth" and "development" in developing countries, and it seems apposite to mention it here.²⁵

The growth of Kuwait's oil revenue, state reserves, and school enrolments are used as illustrations of Kuwait's development. Such indicators are apt to give a misleading picture. One indicator of the "under-developed" state of Kuwait's economy might be the diminishing share of employment that tertiary sectors account for, and the growing share of secondary sectors.

Another unusual aspect of Kuwait's development is the imbalance between G.D.P. and employment, by sector. Table 4.57 (in the Appendix) shows that the Petroleum sector accounts for 56.6% of G.D.P., and Table 4.58 that it accounts for 3.1% of employment in 1970. Table 4.7 summarises Tables 4.57 and 4.58 (in the Appendix). It shows considerable difference between the significance of each sector in terms of G.D.P., and of employment.

TABLE 4.7. DISTRIBUTION OF EMPLOYMENT AND GROSS DOMESTIC
PRODUCT BY ECONOMIC SECTOR IN 1970.

<u>Economic Sector.</u>	<u>Distribution of Employment.</u>	<u>Distribution of G.D.P.</u>
Agriculture and Fishing	1.7	0.5
Crude Petroleum, Natural Gas and other Mining and Quarrying	3.1	56.6
Manufacturing	13.7	3.7
Construction	14.4	4.0
Electricity, Gas, Water and Sanitary Services	3.1	3.7
Wholesale and Retail Trade	14.1	8.6
Transport, Storage and Communications	5.2	3.6
Community and Personal Services	44.7	19.3
Total	100.0	100.0
Total Number	234,360	983 (K.D. Mn).

Source: Tables 4.57 and 4.58 (in the Appendix).

d) Segmentation of Labour.

A segmentation between Kuwaiti and non-Kuwaiti labour has emerged in Kuwait. It is particularly obvious in the proportion of the two

groups in different economic sectors. Table 4.58 (in the Appendix) shows that about 62% of all Kuwaitis work in "Community and Personal Services". Non-Kuwaitis are fairly evenly distributed between all sectors, but absorb a higher than proportional share of the "Manufacturing" sector and the "Construction" sector jobs. They are under-represented in the "Community and Personal Services" sector.

Segmentation of labour between occupations is more obvious. Table 4.8. shows the proportion of Kuwaitis and non-Kuwaitis by occupational groups. There are seven occupational groups, each one defined by a level of training or education.³⁰ The conventional groupings of occupations found in the International Standard Classification of Occupations³¹ are not designed to assist an analysis of the educational or training development of a workforce, so this adaptation is used. The seven groups are defined as follows:

- A-1: Professional and Technical occupations, usually requiring a Science/Mathematics based University degree.
- A-2: Professional occupations, usually requiring a Liberal Arts based University degree.
- B: Sub-professional and Technical occupations, usually requiring one to three years post-secondary education.
- C-1: Skilled office occupations, usually requiring Secondary completion.
- C-2: Skilled manual occupations, usually requiring pre-vocational and/or training related classroom instruction.
- C-3: Semi-skilled occupations, usually requiring only on-the-job training.
- D: Unskilled occupations, usually requiring no special education or training.

Jobs which require different education and training backgrounds are fairly clearly distinguished by this method of occupational division.

Some examples of the occupations found in each group are shown below:

- A-1: Chemists, Chemical Engineers, Pharmacists.
- A-2: Economists, Accountants, Lawyers, General Production Managers.
- B: Physical Science Technicians, Physiotherapists, Statistical Technicians, Teachers.
- C-1: Clerical Supervisors, Typists, Book-keepers, Sales Supervisors.
- C-2: Machine tool setter operators, motor vehicle mechanics, radio and television repair men, welders and flame cutters.
- C-3: Still and reactor operators, bakers, tailors, shoemakers, plasterers.
- D: Construction labourers, Motor vehicle drivers, dockers and freight workers.

As we intend to use this framework for analysis of the labour force, it is important to outline the implicit assumptions behind these groupings. The first assumption is that particular jobs require similar standards of education and training. While this may not hold true for all jobs within a group, it is thought to hold for most occupations. Doctors usually require degrees, and electricians literacy plus some training, in order to be effective. The occupational groups are not intended to imply normative education or training standards for all jobs in Kuwait, but rather useful categories for comparing occupations with similar education and training backgrounds.

A second assumption is that it is reasonable to describe the jobs found in the Arabian Peninsula by means of the I.S.C.O. The principal failings of this classification system occur in developing countries which have a large agricultural sector, and little modern sector employment. Kuwait has very little informal sector employment, and also is almost entirely an urban community. The use of the I.S.C.O. for Kuwait is reasonable, but it is not an ideal classification.

Returning to Table 4.8. we notice the considerable overrepresentation of Kuwaitis in two groups, "A-2, Professional Occupations, usually requiring an Arts based University Degree" (53.3%) and in

TABLE 4.8. EMPLOYMENT BY OCCUPATIONAL GROUP AND NATIONALITY, 1970.

<u>Occupational Groups</u>	<u>Total</u>	<u>Kuwaiti</u>	<u>%Share of Total</u>	<u>Non-Kuwaiti</u>	<u>% Share of Total</u>
A-1: Professional and Scientific occupations, usually requiring a Science/Maths based University Degree:	7,318	752	10.2	6,566	89.8
A-2: Professional occupations usually requiring an Arts based University Degree:	5,561	2,767	53.3	2,594	46.7
B: Sub-professional and Technical occupations, usually requiring one to three years post-secondary education:	23,183	4,909	21.1	18,274	78.9
C-1: Skilled office occupations, usually requiring secondary completion:	32,140	11,673	36.4	20,467	63.6
C-2: Skilled manual occupations, usually requiring Vocational and/or Training related classroom instruction:	63,807	12,969	20.3	42,999	79.7
C-3: Semi-skilled manual occupations, usually requiring literacy plus on-the-job training:	50,071	8,911	17.8	41,160	82.2
D: Unskilled manual occupations not requiring special education or training:	63,047	19,501	30.9	43,546	69.1
Total:	237,755	61682	25.9	176,073	74.1
Source:- 1970 Census, Kuwait, Taken from Tables 23A and 23B, pp. 197-214. (Arabic).					

128.

"C-1, Skilled Office Jobs" (36.4%) and particular under-representation in "A-1, Professional Occupations usually requiring a Science based University Degree" (10.2%). Table 4.8 is a summary of a fuller table (4.59 in the Appendix) which gives the Kuwaiti and non-Kuwaiti share of each of eighty occupations. Table 4.59 shows that Kuwaitis tend to concentrate particularly in certain occupations, and Table 4.9 shows that a majority of Kuwaitis are found in nine occupations. These few occupations account for 72% of the entire Kuwaiti workforce, "Fire-fighters and Policemen" alone account for 26.3% of all active Kuwaitis.

For the time being we will not pursue the question "Why are so many Kuwaitis working in so few occupations?", but only note that they are doing so.

TABLE 4.9. KUWAITI EMPLOYMENT IN SELECTED OCCUPATIONS, 1970.

<u>Occupation</u>	<u>Number of Kuwaitis</u>	<u>% of Total</u>
Government Executive Officials	1,864	3.1
Teachers	1,766	2.9
Book-keepers, cashiers and related workers	1,061	1.7
Clerical and related workers	6,731	11.3
Working proprietors	2,910	4.8
Firefighters and Policemen	15,678	26.3
Salesmen, shop assistants and related workers	2,948	4.9
Transport operators	4,191	7.0
Building caretakers	6,035	10.1
Total	43,184	72.1
Other Workers	16,450	27.9
TOTAL	59,634	100.0

Source: Taken from 1970 Census, Kuwait, Table 23, p.196 (Arabic).

Further evidence of the segmentation of labour is found when the sector of employment is considered. Table 4.10 provides information on three sectors in Kuwait, "Private", "Mixed" and "Government", and covers slightly less than 61% of all active Kuwaitis and 88% of all non-Kuwaitis. Not covered by the table is the Oil Sector, unemployed persons, quasi-government bodies (e.g. Kuwaiti Airways, the University).

The table shows that 85% of all Kuwaitis in the sample work for the government, while almost 60% of non-Kuwaitis work in the Private sector. In the Private sector, Kuwaitis account for 5% of total employment, in our sample, and non-Kuwaitis the remainder. Similarly, very few Kuwaitis work in the mixed sector, constituting only 7% of all mixed sector employment. Kuwaitis work mainly for the government, but non-Kuwaitis work in all sectors and account for practically all the workforce in the mixed and private sectors.

TABLE 4.10. EMPLOYMENT IN THE PUBLIC, PRIVATE AND MIXED SECTORS, BY NATIONALITY, 1970 - 1972.

<u>Sector</u>	<u>Kuwaitis</u>	<u>%</u>	<u>Non-Kuwaitis</u>	<u>%</u>	<u>Total</u>	<u>Kuwaiti Share(%)</u>
Private	4,876	12.2	92,528	59.2	97,404	5.0
Government	34,588	86.3	55,349	35.5	89,937	38.5
Mixed	591	1.5	8,213	5.3	8,804	6.7
Total	40,055	100.0	156,090	100.0	196,145	20.4

Note: (1) Table excludes oil sector and some non-government bodies such as the University, Kuwait Airways, K.F.A.E.D., which are on "separate" budgets.

Source: Private: Planning Board, Statistical Abstract, 1974, Table 36, p.69.
Government: Planning Board, Statistical Abstract, 1974, Table 40, p.71.
Mixed: Central Office for Vocational Training, Manpower and Training, p.42 (Arabic).

c) Educational Attainment.

The educational attainment of non-Kuwaitis is slightly higher than that of Kuwaitis, particularly in the proportion holding degrees (6.8% and 1.9% respectively). Amongst Kuwaitis, the few women who do work are on the whole much better educated than the men. Almost 61% of active Kuwaiti women hold at least intermediate certificates, whilst only 13% of all men do so (see Table 4.60 in the Appendix).

In Chapter 3 we noticed a considerable difference (Table 3.14) in the distribution of educational attainment between different nationalities. It will be recalled that the "Jordanian and Palestinian" and the "Lebanese" communities appeared to be the best educated in formal terms, while the Iranians and Omanis were the least well educated.

Table 4.61 in the Appendix assists with an analysis of the educational attainment of the workforce by occupational groups. This table shows that in most cases, Kuwaitis and non-Kuwaitis share the characteristic of not having the educational attainment which their job usually requires. Also, it is noticeable that non-Kuwaitis in groups "A-1", "A-2", "B" and "C-1" tend to be better educated than their Kuwaiti counterparts. Interestingly, non-Kuwaitis working in skilled and unskilled manual jobs ("C-2" and "C-3") are not better educated than Kuwaitis to a significant extent, as Table 4.62 (in the Appendix) shows. Non-Kuwaitis have fewer "illiterates" relative to Kuwaitis, but only a small proportion have experienced Intermediate (5.9%) or Secondary (3.2%) education. In other words, whatever enables non-Kuwaitis working in skilled and unskilled jobs to fulfil their tasks efficiently, it is apparently not their "technical" secondary school background. The limited evidence available suggests that on the contrary, their skills were acquired "on-the-job", and it is their experience which distinguishes them from Kuwaitis. This point has some significance for Kuwaiti educationalists determined to replace expatriates.

f) Unemployment

The 1970 Census defined an "unemployed person" as one who was actively seeking work, but who was unable to find it. Table 4.11 shows that very few non-Kuwaitis were unemployed in 1970, only 1.3% of their total workforce. For a non-Kuwaiti a residence permit is conditional upon employment, and it would be very surprising if many non-Kuwaitis were unemployed. The number who are registered as such is sufficiently small to be explained as those persons who were changing their job at the time of the Census. Surprisingly, 8.9% of all active Kuwaitis were recorded as unemployed. Kuwaitis are assured, by law, of a job with the government if they so desire, and government jobs are usually

well paid. The affluence of Kuwaiti society may have led to some Kuwaitis having a low marginal utility for money. Even so, an unemployment rate of almost 9% seems very high.

TABLE 4.11. EMPLOYMENT BY STATUS AND NATIONALITY, 1970.

	<u>Kuwaitis</u>	<u>%</u>	<u>Non-Kuwaitis</u>	<u>%</u>
Employers	2050	3.1	4533	2.6
Self-employed	6042	9.3	28579	16.1
Employees	51161	78.2	140468	79.4
Unpaid workers	295	0.4	915	0.5
Unemployed	5821	8.9	2332	1.3
Not stated	92	0.1	225	0.1

Source: 1970 Census, Table 9, p.23 (Arabic).

g) Under-employment.

If we take as a definition of persons underemployed those whose marginal product is smaller than it might or should be, then we have some evidence of under-employment in Kuwait. The assumption on which the evidence is based is that persons filling particular jobs should have approximately appropriate qualifications. Table 4.12 provides the rationale of the under-employed in each group: doctors and engineers (A-1) should have at least a secondary school certificate; managers, accountants and economists (A-2) and technicians and teachers (B) should have Intermediate school certificates. Skilled office workers (C-1) should be literate at least.

The table shows that, according to this way of measuring under-employment in those four occupational groups, 22% of the 20,500 or so Kuwaitis are "under-employed". But so are 11% of the 47,600 non-Kuwaitis in these groups. Kuwaiti underemployment is often discussed in Kuwait, and it is thought to be most common in government employment. As most Kuwaitis work for the government, our evidence shown here would tend to support that view.

TABLE 4.12. UNDEREMPLOYED PERSONS BY OCCUPATIONAL GROUP AND NATIONALITY.

Occupational Group:	KUWAITIS.		NON-KUWAITIS.	
	No. of Kuwaitis.	No. of Under-employed.	No. of Non-Kuwaitis.	No. of Under-employed.
		%		%
A-1: Professional and Scientific occupations usually requiring a Science/Maths based University Degree:	756	40.9	6,468	10.1
A-2: Professional occupations usually requiring an Arts based University degree:	2,942	15.4	2,422	13.5
B: Sub-professional and technical occupations, usually requiring one to three years post secondary education:	4,914	50.5	18,275	18.4
C-1: Skilled office occupations, usually requiring secondary completion:	11,851	1,244	20,487	1171
Total:	20,463	4,491	47,652	5516
		22.0		11.5

Definition of underemployed used here is that for persons in Groups "A-1"; those not possessing a secondary certificate or higher qualification: "A-2" and "B"; those not having an intermediate certificate or higher qualification: "C-1", whose who are "illiterate".

Source: Abstracted from 1970 Census, Kuwait, Table 23, p.196 (Arabic).

h) The Role of Government as "Employer of the first resort".

It was shown on Table 4.10 that most Kuwaitis worked for the government. There are at least three identifiable reasons for this: pay, conditions and personal preference.

Table 4.13 shows that the government pays better than the private sector, in every occupational group except for the most skilled group, "A-1". Moving from more skilled to the least skilled jobs, the pay differential in favour of government employees increases; in the least skilled group "D" - "Unskilled Manual occupations not requiring special education or training" government pay more than doubles that in the private sector. As Kuwaitis are entitled by Article 41 of the Constitution to employment with the government, it is possible for any Kuwaiti who applies to be employed. There is, therefore, a particular incentive for the least well qualified Kuwaitis to work for the government.

If we map the wage rates shown on Table 4.13 against the number of years of education which are associated usually with each occupational group for the private and the public sector, we obtain some idea of the criteria which control pay. Figure 4.1 shows that typically those with higher skill levels/educational attainments earn more than those with lower levels. The differential of pay in favour of the government is also evident at every skill level except for the most skilled occupational group "Professional workers in occupations which usually require a Science/Maths based University Degree". However, there appears to be a clear difference between the private sector and the public in criteria of pay. The private sector rewards individuals approximately K.D. 118 per annum extra for every year of education after six years of education. The explanation for the disproportionately high pay of "professional" persons may be that

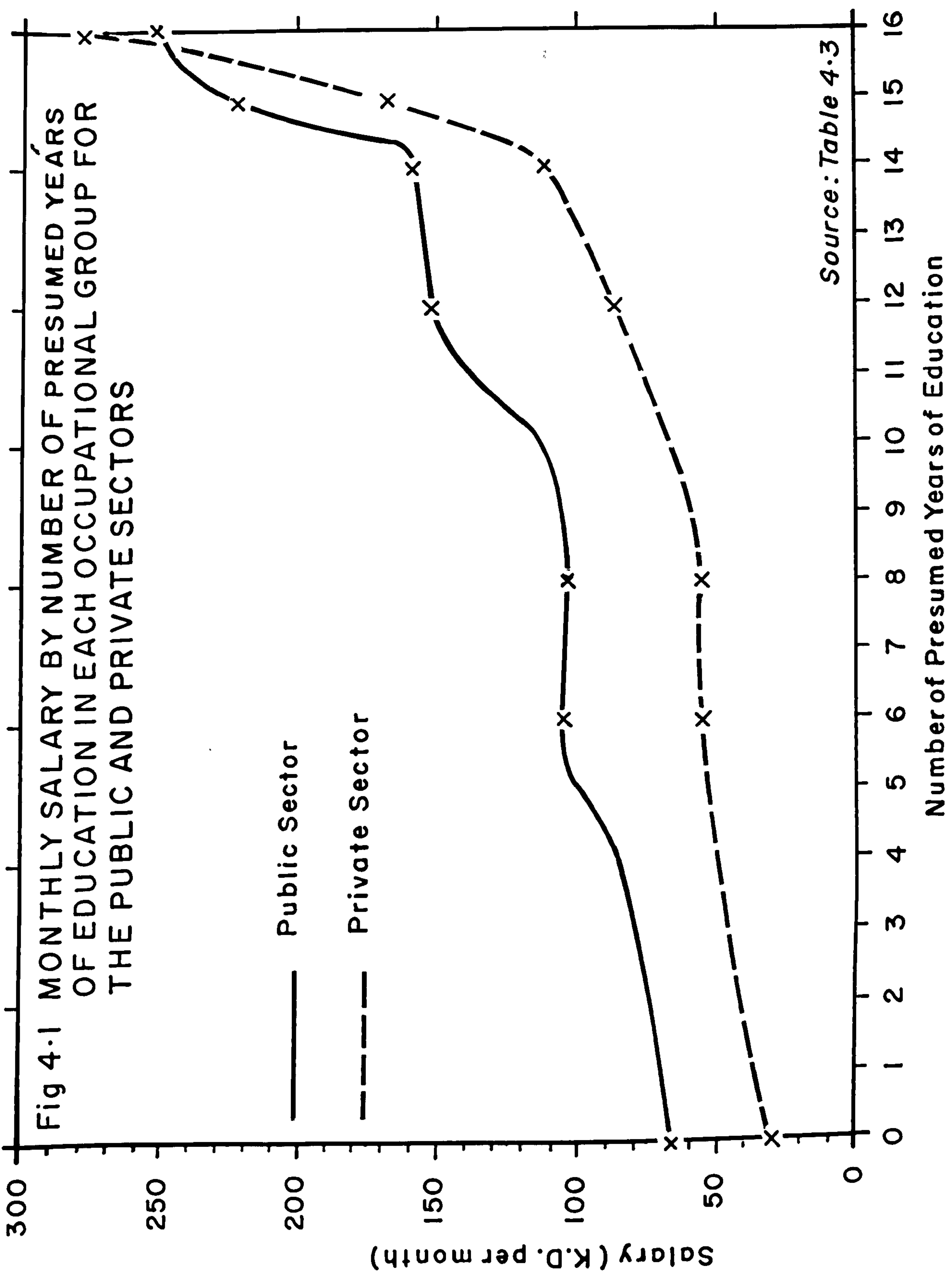


Fig 4-1 MONTHLY SALARY BY NUMBER OF PRESUMED YEARS OF EDUCATION IN EACH OCCUPATIONAL GROUP FOR THE PUBLIC AND PRIVATE SECTORS

Source: Table 4.3

TABLE 4.13. MONTHLY WAGE RATES IN THE PUBLIC AND PRIVATE SECTOR,
BY OCCUPATIONAL GROUP, 1972, IN K.D/MONTH.

<u>Occupational Groups</u>	<u>GOVERNMENT</u> <u>SECTOR.</u>		<u>PRIVATE</u> <u>SECTOR.</u>		<u>Public Sector Wage.</u>
	<u>No. of</u> <u>sample.</u>	<u>Average</u> <u>Wage in</u> <u>K.D.</u>	<u>No. of</u> <u>Sample</u>	<u>Average</u> <u>Wage in</u> <u>K.D.</u>	<u>Private Sector Wage.</u>
A-1: Professional and Scientific Occupations, usually requiring a Science/Maths based University Degree:	1,501	258	1,262	276	.93
A-2: Professional occupations usually requiring an Arts based University Degree:	1,970	221	3,256	166	1.33
B: Sub-professional and technical occupations, usually requiring one to three years post-secondary education:	20,784	158	4,717	114	1.39
C-1: Skilled office occupations, usually requiring secondary completion:	12,467	152	6,215	88	1.72
C-2: Skilled manual occupations, usually requiring vocational and/or training related classroom instruction:	10,766	103	19,785	57	1.81
C-3: Semi-skilled manual occupations, usually requiring literacy, plus on-the-job training:	11,940	105	9,724	55	1.91
D: Unskilled manual occupations, not requiring special education or training:	29,477	69	13,054	32	2.16
Total	88,905		58,013		

Source: Compiled from: Statistical Abstract, 1973, Planning Board, Kuwait, Table 46, p.79 (Arabic).

in Kuwait, where their skills are at a premium, they enjoy a "quasi rent" on their scarceness. We only have the mean wage for what are seven cells, and therefore believe it is not reasonable to test correlations. But our sample, in the private sector is 58,000, and in the public sector it is 89,000. So, while for technical reasons it would not be appropriate to make a sophisticated test of the relationship between "education" and "wages" for the private sector, it is reasonable to conclude that a relationship does exist, given the closeness of the fit visually.

Turning to the public sector, we do not observe the same type of relationship. We can say though that there seems to be "stages" of pay, one being at the K.D. 105 per month level and one at the K.D. 155 per month level, which might correspond to some administrative criterion but not to educational or skill level.

If we take presumed "educational" or "skill" level as indicative of marginal product, then we might conclude that in general the private sector tends to pay on that basis, and in general, the public sector does not. The only exception being the pay of the most highly skilled people, who earn, in Kuwait, a "quasi rent" on their scarcity. Table 4.14 shows actual pay scales in government employment for Kuwaitis and non-Kuwaitis in 1972. The former are better paid than the latter at every Civil Service "Range", but particularly at the lower end, where the Kuwaiti rate is almost double that of non-Kuwaitis.

TABLE 4.14. GOVERNMENT SALARY SCALES BY RANGE AND NATIONALITY, 1972.

	<u>Kuwaitis</u>	<u>Non-Kuwaitis</u>
Range I	505	n.a.
Range II	390	380
Range III	231	209
Range IV	152	107
Labourer	202	103

Note: n.a. Indicates not available.

Source: Stanford Research Institute, Table III.4., Compiled from information provided by the Civil Service Committee, State of Kuwait.

From what we have said so far it is clear that many non-Kuwaitis work in the government, and that their presence is important to the smooth functioning of government. From Tables 4.13 and 4.14 it appears that those non-Kuwaitis working in the government may often be less well off than their colleagues in the private sector, and indeed, most Kuwaitis do work there. If the level of wages in the public sector paid to non-Kuwaitis were to slip below the level of wages in the private sector, and if it began to pay non-Kuwaitis, after taking into account all the advantages of working for the government, to work for the private sector, then presumably there would be a migration of non-Kuwaiti workers from the government to the private sector. We could think of this situation being illustrated by the two curves on Figure crossing over. There are indications that something like this has occurred recently, and the government is said to be extremely concerned at the departure of many senior non-Kuwaitis from government posts.³²

The evidence we have on conditions in government service suggests that they compare favourably with those in the private sector. Holidays tend to be longer, working hours shorter. It is often said in Kuwait that in the government, some Kuwaitis merely "sign on" each morning and then go home. Taken together, Tables 4.63 and 4.64 (both in the Appendix) suggest that conditions in the government favour Kuwaitis. Table 4.63 shows Kuwaitis to be less well qualified in academic terms than non-Kuwaitis, but as Table 4.64 shows, promoted as rapidly up the salary scale as non-Kuwaitis. At each salary "Range", the two groups are almost exactly equal numerically. There are many more non-Kuwaiti labourers than Kuwaitis, and the former are classified as "casual" and not as "permanent" labourers.

Besides the considerable financial rewards to employment with the government, Kuwaitis seem to prefer to work for it, possibly because of the security it affords. In a Survey of Social Attitudes, 93% of all enumerated Kuwaitis responded to the question, "If there were no

difference in pay, which type of employer would you prefer?", that they would choose to work for the government.³³ When asked what they would like in addition to their present job, 68% replied that they would like "more security". In the sample of 446 Kuwaitis, 85% worked for the government, so more than half of those who requested "additional security" were already government employed. Evidently, job security is a major factor which influences Kuwaiti job selection. But the comfortable advantage of government employment in respect of pay, particularly for the least well qualified, is probably the dominant factor.

From the limited evidence we have it appears that the government is currently using employment in government service as a means of income distribution. As a result of the relative pay for different jobs, the government is affecting the allocation of resources. Kuwaitis will tend to prefer jobs which yield the highest returns. Without a substantially greater consideration of the costs and benefits to Kuwaitis, it is impossible to know, for different graduates, what type of education and job will maximise their economic return. But it appears that the least skilled jobs are relatively highly rewarded, that clerical jobs are highly rewarded, and that skilled manual and the technician/teacher type of job is not well rewarded, relative to the others. The effect of these pay differences on the performance in schools, and career choice of Kuwaiti pupils is probably a great deal stronger than internal educational attempts to persuade or influence pupils.

i) Conclusion.

1. There are three non-Kuwaitis in the workforce for every Kuwaiti. The former group includes several different nationalities, each of which tends to work at different skill levels.
2. The small Kuwaiti share of the total workforce is not the result of a low participation rate amongst Kuwaiti men. On the contrary, most Kuwaiti men work, but very few Kuwaiti women work outside the home,

and those who do, tend to be well educated. The Kuwaiti labour supply is unlikely to increase substantially unless many more Kuwaiti women work. The lengthening experience of education amongst Kuwaiti women is likely to encourage a higher participation rate amongst the younger adult women in the future.

3. A distinct segregation between Kuwaiti and non-Kuwaiti labour exists. Most Kuwaitis work for the government, whilst non-Kuwaitis fill most Manufacturing and Construction Sector jobs. Kuwaitis tend to work in a limited number of non-technical occupations, whilst non-Kuwaitis fill most scientific and technical jobs. In government circles, Kuwaitis are better paid than non-Kuwaitis.

4. In skilled and unskilled manual jobs, non-Kuwaitis are not noticeably better educated than Kuwaitis, except that fewer of them are illiterate. Very few non-Kuwaitis in these types of jobs have a "technical" secondary school education, and presumably acquired their skills "on-the-job". If Kuwaiti educational planners wish to replace expatriates at this level, the place of "technical" secondary schools has to be carefully considered.

5. Government pay scales are higher than for comparable jobs in the Private sector, particularly for unskilled and manual jobs. The government tends to pay Kuwaitis higher rates than non-Kuwaitis, particularly in the least skilled jobs. Although Kuwaitis are less well educated than non-Kuwaitis, they are promoted as quickly.

Therefore, there is a strong incentive for Kuwaitis, and particularly the least skilled and uneducated, to work for the government, where not only their pay will compare favourably with alternative employment opportunities, but also their conditions and their job security.

6. If most Kuwaitis work for the government, then the relative pay scales and conditions of employment within the government will considerably influence the career choice of Kuwaiti students and pupils, and possibly their performance in schools. A consideration of current

government pay rates suggests that: skilled office workers are paid significantly better than skilled manual workers; technicians and teachers are not paid significantly better than skilled office workers; engineers and scientists are paid only slightly better than managerial workers, accountants, economists.

4.4. Inter-action of Economic Development and Employment.

a) Capital Intensive Industry

The oil industry and its associated petrochemical activities are "capital intensive". As a result, very little employment is found in the oil sector. While it accounts for 56.6% of G.D.P. (1970/71), it only offers a total employment of 7,171, which is 3% of all employment.

b) Income Distribution

A major concern of the government has been to distribute amongst its citizens the wealth which oil has brought to the state. One way of doing this has been to maximise government employment of Kuwaitis, and pay high rates of pay. However, this policy has meant that often Kuwaitis are prepared to work only for the government, and expatriates are required for the majority of non-government jobs.

c) Implications of development through expatriate labour, I.

Initially, Kuwait used expatriate labour to develop the country much faster than would have been possible without their help. Over time, the expatriate workforce has become an expatriate community, having the same demand for Social Services and Utilities as the Kuwaiti community. As a result, some of Kuwait's resources have been allocated to providing these for the expatriate community. In Kuwait, capital is relatively cheap, and the amount required for another water desalination plant, for example, is relatively small. However, there are at least three areas where Kuwait does not have a relative abundance of resources: education, health and housing. For the first two items the problem is not the construction of new schools or hospitals, but their administration and organisation, and more important, by the recruitment of expatriate teachers, doctors and nurses. The problem becomes a cumulative one, as the children of additional expatriates in their turn will also require schooling, hospitals and houses.

The government has found itself having to pay a price for expatriate labour which is very much higher than their wage alone. It has also found itself committed to providing Social Services for an additional number of expatriates involved in the administration of Social Services for other expatriates.

d) Implications of development through expatriate labour, II.

When the Steel Mill was cancelled in 1975, the Minister concerned gave as the reason the large number of expatriate workers necessary to construct and operate the plant. The implications of this for long term development in Kuwait is a modification of the policy of diversification through industrialisation. Evidently the expatriate "problem" has led to a revision of Kuwait's long term strategy. Expatriates, who at one point represented the means whereby Kuwait could achieve a higher standard of living for Kuwaitis, have now become a constraint to the accomplishment of current development aims.

PART IIBAHRAIN.Introduction.

Bahrain's income from oil is only a small fraction of that enjoyed by Kuwait or Qatar, and Bahrain has a sizeable population of 200,000 (1971). For her, the purpose of economic development has been, and still is, the more familiar one of raising the standard of living for her people. In 1975, 77% of all Bahraini households were earning less than B.D. 100/month.³³ The annual oil income per capita of nationals in 1970 was \$ 195, compared with \$3,599 for Kuwait and \$ 6,368 for Qatar.³⁴

Three elements can be distinguished in Bahrain's development of strategy, each of which is based on one, or, a combination of, her factor endowments. These include a limited amount of oil, substantial quantities of natural gas, a sizeable workforce by Gulf standards, and a central position in the Arabian Gulf. The first element of the development strategy has been the exploration of oil resources to achieve the maximum benefit to islanders, and has led to her refining her own oil. Second, Bahrain's position in the Gulf has been used to develop her entrepot port activities, a communications centre, and more recently, a commercial centre. A third element which has been introduced lately, is the creation of an alternative source of income to oil revenues. The aluminium smelter is an example of this element. Underlying all three is a concern to create employment opportunities for Bahrainis in the "modern" sector of the economy, which are productive, and which, preferably, can earn foreign exchange for the economy.

4.5. Characteristics of Economic Development

a) Early Economic conditions

Bahrain's first steps towards creating a "modern" state probably occurred in 1918, when the first schools, hospitals and clinics were opened. It was not until 1932, fourteen years later, that oil was discovered, by which time a significant educational structure was in existence.³⁵ Bahrain's revenues from oil extraction and refining have been small compared with those of Kuwait or Qatar. As a result, Bahrain has always been obliged to live within more limited means.

In common with the inhabitants of Kuwait and Qatar in the 19th Century, Bahrainis fished and pearled. In addition though, Bahrain became a major entrepot and commercial centre. At the height of the pearling industry, in the early 1900's, there were possibly as many as 1,500 boats, and 20,000 men were employed in the pearling season.³⁶ Out of season, more traditional activities were followed, including weaving, fishing, pottery, general trading and farming. A relatively abundant supply of water made possible the cultivation of dates and lucerne grass.

b) Economic Development in the 20th Century.

The collapse of the pearling industry in the 1920's was potentially as serious for Bahrain as it was for Kuwait and Qatar. But, as a trading centre, Bahrain was cushioned from the more extreme consequences. The Royal Navy Blockade of Kuwait (and subsequently Ibn Saud's)³⁷ gave Bahrain an opportunity to expand her "re-trading" activities, and goods destined for Kuwait passed through Bahrain.

Although Bahrain's oil revenue was never more than a fraction of Kuwait's or Qatar's, it was developed sooner, and gave Bahrain an advantage over the other two in economic development. Also, the oil revenue was never so large as to dominate all economic life, and it did not have associated with it the disruptive effects that are found in

Qatar and Kuwait. Before examining Bahrain's economic development after 1945, the oil industry, which until recently dominated the economy, will be examined, and the allocation of government spending and organization of finance noted.

c) Development of the Oil Industry.

In 1932 the first oil well was sunk in the south of the island. At the time, its significance was not widely appreciated by the people of Bahrain. To the small cadre of government officials, it was extremely important, as the limited income from customs duties had become insufficient to fund Bahrain's expanding social services.³⁸ The impact of oil on the economy of Bahrain was considerable. In the first place, it created an alternative source of income to customs dues, and enabled the government to expand and proceed with investments in human resources. Second, the government and "Bapco" (Bahrain Petroleum Company) immediately decided to refine all the crude oil extracted. This meant not only building the refinery, but also that a large workforce would be required to man it. Bahrainis were generally poor, and were only too willing to enlist in Bapco. In 1938, 2,000 Bahrainis were employed by the company and an increasing number since then. In 1973 their number (3,313) accounted for 89.3% of all Bapco employees.³⁹

An additional benefit to Bahrain's economy which followed from the decision to refine the crude oil, and to use Bahrainis to do it, was the considerable training of Bahrainis at all levels. Many Bahrainis who were trained by Bapco either at home or abroad, subsequently left the company and used their training elsewhere in the island.

By making all purchases locally, Bapco also enhanced the prosperity of Bahraini traders. At the time the refinery was built it was the first in the Gulf. The refinery was well placed to export its output to the Far East, since at that time no refinery existed outside Europe to

supply those markets.

As early as 1932, Bahrain's wells produced 84 barrels per day on average. By 1940 the average output per day had been raised to 19,380 barrels.⁴⁰ Production reached a maximum in 1970 of 76,940 b.d. Since then the pressure at the well heads has diminished steadily, and this, combined with the desire to conserve remaining stocks, has led to a sharp decrease in output since 1970, as Table 4.15 shows:

TABLE 4.15. CRUDE OIL PRODUCTION AND REFINERY OUTPUT, 1969/70 TO 1975/76.

<u>Year</u>	<u>Crude Oil Production</u> <u>(in Bahrain)¹</u>	<u>Refined Output</u>
1969/70	76,400	228,219
1970/71	76,940	241,643
1971/72	75,220	246,301
1972/73	70,000	228,767
1973/74	68,000	236,986
1974/75	68,000	238,665
1975/76 ³	56,295	n.a. ²

Notes: (1) All figures in barrels/day.
 (2) Refinery capacity is now 270,000 b/d., and output is probably in that region.
 (3) January 1976 figure only.

Source: 1969/70 to 1974/75, Ministry of Finance, Statistical Bureau, Statistical Abstract 1974/75, Bahrain, 1975, Table 27, p.34.
 1975/76, Middle East Economic Digest, 20th February 1976, p.11.

In 1935 it was decided to refine Bahrain's oil on the island. The refinery initially had a capacity of 10,000 b.d. After its first year of operation its capacity was raised to 25,000 b.d., and it has increased steadily since then to the current capacity of 250,000 - 270,000 b.d. It is a complicated refinery, and has the facility to produce 57 different products. Having the first refinery in the area, Bahrain benefitted from the discovery of Saudi Arabia's huge reserves, and subsequent production. In 1946, Saudi Arabian crude oil accounted for 79%⁴¹ of all refined oil at Bapco's refinery. In fact this share had fallen to 77%⁴² by 1970, but as Bahrain's reserves diminish and increasingly stringent conservation measures proceed, this share seems likely to increase.

In the early 1950's Bahrain benefitted from the temporary closure of the only other refinery in the area at that time, In Abadan.

Bahrain's "oil" revenue now comes from four sources; her own crude oil production; refining activities; her share of the Abu Safah oil field, which she shares with Saudi Arabia; and natural gas reserves. In 1935 the Bahrain government received B.D. 56,800 from Bapco's crude oil production, in 1950 B.D. 930,000.⁴³ Revenue from refining activities was first received in 1951 and from the Abu Safah oil field in 1966.⁴⁴ By 1970 her total "oil" income was B.D. 17,410,000.⁴⁵

The discovery of large reserves of natural gas has come at a crucial time for Bahrain; her own reserves of crude oil are thought to have only twenty years of life left. The significance of the natural gas lies in its potential as a source of cheap energy, and reserves are estimated at between 8,000 and 11,000 billion cubic feet.⁴⁶

d) Development of the Budget.

i) Government Income

After oil was discovered government income increased with the expanding output of oil. The traditional source of government income (customs duties) progressively accounted for a smaller proportion of government revenue from 1935 onwards. Table 4.16 shows, in aggregate, the sources of government revenue from 1947/48 to 1969/70. Oil revenue accounts for more than three-quarters of the total.

TABLE 4.16. PUBLIC REVENUE BY SOURCE, 1947/48 to 1969/70 (B.D.000's).

<u>Source:</u>	<u>Amount</u>	<u>%</u>
Oil	167,030	75.9
Customs	36,640	16.6
Other	16,575	7.5
Total	220,245	100.0

Source: Calculated from Al-Kuwari, 1974, op.cit., Table 4.2., p.114.

From 1970/71 onwards oil accounted for an increasingly large share, particularly after production in the offshore field of Abu Safah increased, and, more importantly, after the price increases of 1973/74. Table 4.17 gives the details up to 1976/77.

TABLE 4.17. GOVERNMENT REVENUE BY SOURCE, 1969/70 TO 1976/77,
IN B.D. Mn.

<u>Year</u>	<u>Bahrain</u> <u>Oilfield</u>	<u>Abu Safah</u> <u>Oilfield</u>	<u>Customs</u>	<u>Other</u>	<u>Total</u>
1969/70	9.66	2.98	2.8	1.47	16.91
1970/71	9.61	2.91	3.18	1.7	17.4
1971/72	10.94	5.01	3.53	2.42	21.9
1972/73	11.02	5.0	3.88	3.1	23.0
1973/74	17.5	n.a.	n.a.	n.a.	32.5
1974/75	41	n.a.	n.a.	n.a.	53
1975/76	111	n.a.	n.a.	n.a.	134
1976/77	131	n.a.	n.a.	n.a.	181

Source: 1960/70 to 1973/74: Ministry of Income and National Economy, Commerce and Industry Directorate, Industrial Planning, August 1973, Table Ia, p.34.
1974/75 to 1976/77: details compiled from issues of Middle East Economic Digest, 1974/75 to 1976.

ii) Government Expenditure

Government income was divided, until recently, between Current Expenditure, Capital Expenditure and the Ruling Family. This last share was theoretically fixed at one third of the total, but this varied. If a Budget surplus occurred, investments were made into the State Reserve. Table 4.18 shows the division between "Current", "Capital" and "Ruling Family" in selected years. 1947/48 was the first year in which a "Budget" was announced.

Inconsistent and unusual methods of internal accounting in Bahrain argue against exacting analysis of the table. Overall, it is evident that current expenditure absorbed a large proportion of the government share of the country's income.

TABLE 4.18. ALLOCATION OF GOVERNMENT EXPENDITURE IN SELECTED
1947/48 TO 1970/71 (%)

<u>Year</u>	<u>Type of Expenditure.</u>		<u>Ruling Family (%)</u>
	<u>Current (%)</u>	<u>Capital (%)</u>	
1947/48	48.0	25.6	26.4
1950/51	38.7	32.5	28.8
1955/56	33.2	37.3	29.5
1960/61	43.0	30.7	26.3
1965/66	55.4	22.3	22.3
1970/71	64.4	6.3	29.3
Actual Amount, 1947/48 to 1970/71 in B.D. 000			
	111,590	42,179	62,789
%	51.7	19.4	28.9

Source: Abstracted from Al-Kuwari, 1974, op.cit., Table 4.2.7., p.302.

Table 4.19 shows a reversal of this distribution from 1973/74 onwards. The figures we have for 1970/71 and 1976/77 do not distinguish payments to the ruling family. These were made from current expenditure and in 1974/75 were fixed at B.D. 8 mn. Table 4.19 suggests that with an increasing income, the government spent more on infrastructure, and capital investments, both absolutely and relatively, which reflects an intention to create alternative sources of income to oil revenues.

TABLE 4.19. ALLOCATION OF GOVERNMENT REVENUES, 1970/71 to 1976/77
(in B.D. Mn.)

<u>Year</u>	<u>Type of Expenditure</u>		<u>Total</u>
	<u>Current</u>	<u>Capital</u>	
1970/71	n.a.	n.a.	18.24
1971/72	n.a.	n.a.	22.65
1972/73	n.a.	n.a.	22.12
1973/74	23.7	8.8	32.5
1974/75	35.5	17.5	53.0
1975/76	68.0	61.0	129.0
1976/77	91.0	100.0	191.0

Source: 1970/71 to 1972/73, Ministry of Finance and National Economy, Industrial Planning, August 1973, Table I.b., p.36.
1973/74 to 1976/77, Figures in Middle East Economic Digest, for 1976/77 found in 20/2/76, p.10.

The very rapid increase in total expenditure in recent years has been facilitated by the increased price of oil which came at a highly propitious time for Bahrain.

iii) The Budget.

From 1947/48 to 1960/61 the government accumulated a surplus of receipts over payments. However, from 1960/61 to 1970/71 rising levels of capital and current expenditure led to deficits of increasing size and overall there has been a deficit of B.D. 8.3 m. in that period, as Table 4.20 shows.

TABLE 4.20. GOVERNMENT BUDGET BALANCE, 1947/48 TO 1960/61, AND 1960/61 TO 1970/71 IN B.D. Mn.

1947 /48 to 1960/61	=	+ 12.8
1960/61 to 1970/71	=	- 8.3

Source: Calculated from Al-Kuwari, 1974, op.cit., Table 4.1.

The Reserve Fund, estimated at B.D. 10.2 m in 1959 was used as a source of revenue through the period 1960/61 to 1970/71 to finance deficit budgets, and so by 1970/71 it had dwindled to an estimated B.D. 5.5 m.⁴⁷ In 1941 the government ran another budget deficit of B.D. 750,000. Deficits in following years would suggest that the State Reserve was used up to 1974/75 to fund government spending, by which time the account would presumably have almost closed. Table 4.21 gives details for 1971/72 to 1976/77.

TABLE 4.21. GOVERNMENT OF BAHRAIN BUDGET - REVENUE AND EXPENDITURE, 1971/72 to 1976/77 (B.D. Mn).

<u>Year</u>	<u>Expenditure</u>	<u>Revenue</u>	<u>Balance</u>
1971/72	22.65	21.9	- 0.75
1972/73	22.12	23.0	- 0.88
1973/74	32.5	27.7	- 4.6
1974/75	53.0	53.0	0.0
1975/76	129.0	134.0	+ 5.0
1976/77 ¹	191.0	181.0	-10.0

Note (1): Recently announced as estimates.

Source: Tables 4.15 and 4.17.

The anticipated deficit for 1976/77 will probably not occur. While Bahrain has been exceptional amongst Gulf States in spending her entire "budget" and more, her budgets have been, relative to total population, small. However, the experience of rapidly rising revenues and large

increments in government spending is new to Bahrain, and it is unlikely that the entire allocation of B.D. 191 Mn. will be spent in 1976/77.

c) Post 1945 Economic Development

Two activities dominated Bahrain's economy up till the mid-sixties: the oil industry and the entrepot trade. Bapco continued to provide employment for increasing numbers of Bahrainis, at progressively higher skill levels. It was a deliberate policy to "Bahrainise" the company, and by 1973 this was virtually accomplished. The entrepot trade expanded with the increasing demand for imported goods of neighbouring oil rich states without deep water ports. Table 4.22 shows Bahrain's "exports and re-exports", excluding oil and petroleum products in 1959, 1969 and 1973.

TABLE 4.22. BAHRAIN'S EXPORTS AND RE-EXPORTS, 1959, 1969, 1970.
(in B.D. million) - non oil.

<u>Country</u>	<u>1959</u>	<u>1969</u>	<u>1973</u>
Saudi Arabia	6.1	9.9	16.5
Qatar	1.6	2.3	1.5
Iran	1.3	0.6	1.9
Kuwait	0.6	1.7	1.2
U.A.E.	-	2.2	4.0
Other	1.2	3.2	6.9
Total	10.8	19.9	32.0

Source: 1959 Statistical Bureau, Statistical Abstract 1967, Table 74, p.50.
1969 and 1973: Statistical Bureau, Statistical Abstract 1973,
September 1974, Table 67, p.87.

The volume of "exports and re-exports" to any one country varies as the ratio of demand to port capacity varies. Although Saudi Arabia is now comparatively well endowed in port facilities, her demand for imports has continually outpaced her handling capacity.

The significance of Bahrain's entrepot trade is two-fold. First, the employment it generates, and second the customs duties which the government is able to charge.

In 1960, concerned that she would lose her pre-eminent position in the re-trading business, Bahrain expanded her port so that it could simultaneously handle six vessels, with a maximum draught of 30 foot. In addition a "free transit area" was created adjacent to the docks.

From the mid-1960's onwards five areas of activity developed, the most important of which has been Bahrain's industrial development. The principle feature on the industrial scene has been the development of Aluminium Bahrain Ltd. (ALBA). Formed in 1969, Alba consisted of a consortium of Aluminium brokers and the Bahrain government.⁴⁸ The shareholding of the government was initially 19% and by 1976⁴⁹ had risen to 78%. Bahrain was selected as a suitable location largely on account of its large reserves of (cheap) natural gas and the availability of a reasonably able workforce.

Bahrain's commercial tradition has helped to create her banking centre, which allows foreign banks to operate and often offers low taxation rates and the repatriation of profits, which have encouraged foreign banks to move to Bahrain, occasionally "re-locating" their head office from Beirut.

An increasingly complex "productive" service industry has developed, which includes the Bahrain Ship Repairing and Engineering Company. This concern has two small slipways, capable of taking ships for repair up to 1,000 tons dead weight. Equally significant, is the "mobile unit" of this concern, which has the capacity to travel to the site of the business, land or sea. A hotel trade has sprung up in the last five years and has become a significant source of foreign exchange earnings and of employment.

The communications of Bahrain are unrivalled in the Gulf. The earth-satellite link connects Bahrain by telephone and telex to the

outside world promptly, a significant encouragement to business.

The expansion and improvement of the entrepot trade has resulted in almost no time lost unloading, in an area where two months waiting is the norm.

In the last three years each of these five activities has expanded and diversified. The aluminium plant reached its planned output in 1972 of 120,000 tons per annum. As the largest industrial operation in the Arabian Peninsula, it has been remarkably successful. It has overcome a variety of problems, including labour disputes, labour unsuitability and a collapsing market for aluminium. Work at Alba for the majority of the workforce is unpleasant shift work, conducted in a hot and dusty environment. Staff at the plant mentioned absenteeism; a lack of industrial orientation; language; physical stature and a "village approach" as the types of problems they face. Alba is staffed in all except clerical and technical posts by Bahrainis, unlike similar concerns in Kuwait which are not staffed by nationals except in clerical positions. Perhaps the price of an indigenous workforce has been a lower level of labour productivity than was anticipated by Alba, who expected to employ 1,400 men at full capacity, while they actually employ 2,600.⁵⁰ At one time there was talk of a second plant, but this idea has recently been dropped.

A network of aluminium related industries are beginning to develop, using Bahrain's cheap natural gas. These include a paint factory, an "atomiser" and an aluminium extrusion plant which will produce window frames, doors, etc. Unrelated to aluminium is the proposed fertiliser plant. The links with Bahrain's refinery activities and her natural gas reserves are clear. Not only do these projects constitute an eventual alternative foreign exchange earner to oil, but as one Minister is quoted as saying in reference to Alba: "even if the profit per ton is £0.01, Alba is still feeding 5% of the families on the island".⁵¹

Banking activities have expanded and the Bahrain Monetary Authority has created an "off shore banking centre" which has thirty licensed operators. The centre seems certain to be successful, as major international banks have taken out licences, and Saudi Arabia has promised to channel some of her \$ 7,000 Billion oil revenue through it. Agreements of this nature are not subject to a formal contract, but the mutual trust between Saudi Arabia and Bahrain and the traditional trading links between the two suggest that this gesture will be supported by the Saudi government.. Whatever the ultimate income to Bahrain from these off-shore Banking Units (O.B.U's) - which may initially only be the licence fees, the essential point is that it will provide Bahrainis with productive employment and probably also train them.

Bahrain also has plans to expand her entrepot trade, by capitalising on her good labour facilities, proximity to Saudi Arabia and the chronic port congestion in the Arabian Peninsula. A causeway has been surveyed from Bahrain to Saudi Arabia, along which imports to Bahrain could be re-exported more efficiently than by the traditional dhow.

Service industries have continued to expand. In sharp distinction to Kuwait, Bahrain's service industries are largely "productive", and "government employment" accounts for only a small proportion of the total. Basrec's two small dry docks are to be followed by one capable of handling "super" - tankers. Funded by O.A.P.E.C., the project is to be built entirely by South Koreans. Again, this is an appropriate strategy as Bahrain has a limited indigenous workforce. The construction of a dry dock is probably a task beyond the technical capability of the workforce, and in any event the main labour, welders, are in considerable demand elsewhere. Moreover, construction projects ultimately finish completely. To orientate Bahrain's limited manpower to construct a dry dock and to then terminate their particular employment would severely disrupt the domestic labour market. However, the servicing of a completed

dry dock is a more realistic aim for Bahrainis.

Gulf Air, jointly owned by Abu Dhabi, Qatar and Bahrain, and based in Bahrain, has expanded its operations dramatically since 1969. Its fleet now includes 3 Tristars and regular flights to London are provided as well as a domestic Gulf Service. Gulf Air has become a very sizeable employer and provides training for Bahrainis. At the present time, British Airways Concorde flights use the airport, and although by themselves they do not add significantly to revenue, they do confirm a widely felt confidence in the efficiency of the Airport. Bahrain has become a training centre for British Airways, attracted by relatively cheap fuel, good weather and an efficient airport. For some years Bahrain has been the stopping-off point for Australia and of Far Eastern flights, and the possibilities of a tourist trade have been considered. The historical legacy of Bahrain, the reasonable climate in parts of the year, and the recent improvements in hotel facilities make tourism a real, if limited, possibility for Bahrain in the future.

4.6. Employment and the Labour Market.

a) Quantitative Development

While the first Census was taken in Bahrain in 1941, it was not until 1959 that information relating to employment was recorded.⁵²

Between 1959 and 1971 total employment rose from 46,955 to 60,301, a modest increase of approximately 2% per annum. The labour force is composed of both Bahrainis and non-Bahrainis. The non-Bahraini share rose over the period from 34.2% to 37.1%, as Table 4.23 shows.

TABLE 4.23. TOTAL EMPLOYMENT BY NATIONALITY AND SEX IN 1959, 1965 and 1971.

		<u>1959</u>	<u>1965</u>	<u>1971</u>
Bahraini	Men	27,875	30,236	36,102
	Women	1,035	995	1,848 (4.8)
	Total	30,910	31,231	37,950
Non-Bahraini	Men	15,630	21,015	20,950
	Women	415	1,028	1,401 (6.6)
	Total	16,045	22,043	22,351
<u>Totals</u>				
Bahrainis		30,910 (65.8)	31,231 (58.6)	37,950 (62.9)
Non-Bahrainis		16,045 (34.2)	22,043 (41.4)	22,351 (37.1)
GRAND TOTAL		46,955 (100.0)	53,274 (100.0)	60,301.

Source: 1959 and 1965: Finance Department, Statistical Bureau, The Fourth Population Census of Bahrain : A Brief Analytical and Comparative Study, Government of Bahrain, August 1969. Various tables.
1971: Ministry of Finance and National Economy, Statistics of the Population Census, 1971, p.13-14.

Almost all eligible Bahraini men work. In 1971 the male Bahraini workforce expressed as a percentage of the same population aged 15-59, represented 86% (see Table 4.65 in the Appendix). For Bahraini women, the proportion was 4.5%. Thus we find in Bahrain the same characteristic as we noted for Kuwait, that very few women work in "wage" employment. The non-Bahraini position is similar, except their participation rates are higher. For men the proportion in 1971 was 101 %, which means that presumably every male non-Bahraini aged 15 to 59 is working, and that some non-Bahrainis younger than 15 and older than 59 are also working.

on the island. The participation rate for women was 21.1% in 1971. These figures tend to support the argument of Chapter 3, that non-Bahrainis (like non-Kuwaitis and non-Qataris) migrate for reasons of employment.

b) Sectoral Development

It is proposed to discuss the development of employment initially on a sectoral basis. It may seem that this approach is limited in that only "modern" sector employment is usually enumerated in Censuses, and we are dealing with Census data here. This weakness would apply more powerfully to an economy with either a large "modern informal sector" than Bahrain has, or, one with a significant proportion of the population engaged in agricultural activities. While the point is noted, it is not thought sufficient to justify exclusion of this type of preliminary analysis of Bahrain's labour force. Her agriculture is very limited, and a very high proportion of jobs are in the "modern wage" sector, as is the case for most Gulf States.

Table 4.24 shows the development of employment in economic sectors from 1959 to 1971 and summarises Table 4.66 in the Appendix.

Agriculture and Fishing.

Employment in this sector has steadily declined from 4,464 persons in 1959 to 3,990 persons in 1971. There have been two factors causing this movement. The first is the increasing salinity of water on the island, and farms which were formerly cultivable now are not.⁵³ At the same time it has been possible to import fruit and vegetables from Iran relatively cheaply. The advent of the wage economy has meant that ordinary Bahrainis can now purchase these items, and in real terms for less than it costs to grow them. The second reason is the increasing number of opportunities for modern sector employment in Bahrain: a familiar sight in Bahrain is disused farms and abandoned fishing traps.

TABLE 4.24. DISTRIBUTION OF EMPLOYMENT BY ECONOMIC SECTOR,
1959, 1965 AND 1971.

<u>Economic Sector.</u>	<u>1959</u>	<u>1965</u>	<u>1971</u>
Agriculture and Fishing	9.5)	8.7)	6.7)
Mining and Quarrying	1.0) 10.5	0.3) 9.0	0.1) 6.8
Manufacturing	2.2)	0.7)	6.8)
Petroleum Refining and Extraction	19.0) 21.2	13.0) 13.7	7.2) 14.0
Construction	10.1)	15.6)	17.5)
Wholesale and Retail Trade	10.1)	13.9)	11.2)
Banking and Insurance	0.6)	0.7)	1.3)
Transport, Storage and Communications) 68.3) 77.3) 79.2
Government Services	3.5)	10.4)	13.0)
Other Services ¹	13.9)	19.5)	19.5)
	29.0)	17.2)	16.5)
Not Stated	1.1)	-)	0.2)
Total	100.0	100.0	100.0
Total Number	46,955	53,274	59,590

Note: (1) Includes "Electricity, Gas and Water", and "Restaurants and Hotels"

Source: Table 4.66.

Petroleum, Refining and Extraction and Manufacturing.

Total employment in these two sectors fell from about 10,000 in 1959 to 8,400 in 1971, and their proportional share of all employment from about 21% to 14%. Two trends are evident: first, as Bapco has become increasingly capital intensive, her total employment has fallen; second, while manufacturing activity on the island has slowly increased since 1959, Aluminium Bahrain, "Alba", has enlarged considerably the number of jobs in the manufacturing sector.

Construction.

Construction sector employment increased fairly rapidly from 4,700 persons in 1959 to 10,400 persons in 1971, an annual rate of increase of 7%. This has been a major growth industry for Bahrain, and more rapid increases in employment have occurred in recent years. By 1971 this sector accounted for 17% of all employment.

Transport, Storage and Communications.

The growth of employment in these sectors has also been very rapid, rising from 1,600 in 1959 to 7,700 in 1971 and increasing its share from 3.5% to 13.0%. The workforce required by companies like "Cable and Wireless" (responsible for Bahrain's telephone communications on the island and with the rest of the world), and "Gulf Air" have been major cause of this increase. The expansion of Bahrain's entrepot trade and her port facilities has been another cause.

Wholesale and Retail Trade, Government Services, Other Services.

Together these three sectors accounted for 46% of all employment in 1959 and 49% in 1971. Government employment accounted for about a quarter of all "tertiary" sector employment in 1971, and unlike Kuwait or Qatar, it has increased very slowly. The expansion of the hotel industry has increased total employment in this group in the past few years.

One final point which should be noted is that the trend of employment shares between "primary", "secondary" and "tertiary" sectors is one which is recognisably similar to that which more developed countries have experienced. The "primary" sectors account for progressively less of all employment, "tertiary" sectors increase their share, and the share of "secondary" sectors appears to be declining slowly. This more familiar pattern of development is quite different from the one Kuwait has experienced, and might be taken as an indication that in some ways Bahrain has reached a higher level of economic development, although she is poorer in G.D.P. per capita terms.

c) Segmentation of Labour.

Economic Sectors:

Bahrainis and non-Bahrainis are distributed between economic sectors roughly in the same proportion as they are in total employment.

No economic sector is the exclusive preserve of one group (unlike Kuwait), as Table 4.25 shows (a summary of Table 4.67 in the Appendix).

TABLE 4.25. RELATIVE EMPLOYMENT BY NATIONALITY AND SECTOR, 1971.

<u>Economic Sector.</u>	<u>Total</u>	<u>Bahrainis (%)</u>	<u>Non-Bahrainis (%)</u>
Agriculture and Fishing	3,990	75	25
Mining and Quarrying	85	97	5
Manufacturing	4,069	43	57
Petroleum Refining and Extraction	4,310	88	12
Construction	10,404	54	46
Wholesale and Retail Trade	6,666	68	32
Banking and Insurance	775	67	33
Restaurants and Hotels	1,040	32	68
Transport, Storage and Communications	7,743	65	35
Government Services	11,607	90	10
Other Services	7,090	10	90
N.A.D.	106	58	42
Total	59,590	63	37

Source: Statistical Bureau, Population Census 1971, Bahrain, pp. 13-14.

Non-Bahrainis are considerably over-represented in "Restaurants and Hotels" and in "Other Services", where they account for 68% and 90% of all employment respectively.

Between 1959 and 1971 the relative shares of Bahrainis and non-Bahrainis in each economic sector remained more or less the same, as Tables 4.68 and 4.69 show (in the Appendix).

We have already noted a more useful classification of occupations than the I.S.C.O. convention in our study of Kuwait.⁵⁴ The same revised approach is used here. Bahrainis hold a proportional share in every occupational group, except for "Professional and Technical" occupations, where their share falls to 18.1%, and in "Skilled Office Occupations" where their share rises to 80.2% (as Table 4.26 shows). Evidently some expatriates are necessary to Bahrain's economy by virtue of their high qualifications. In "blue collar" jobs, skilled, unskilled and manual occupations, Bahrainis retain a share close to their overall one. So,

unlike Kuwait, Bahrain is relatively self sufficient in all skill levels, and nationals do not appear to avoid employment in particular types of jobs.

TABLE 4.26. EMPLOYMENT BY OCCUPATIONAL GROUP AND NATIONALITY, 1971.

<u>Occupational Group</u>	<u>Total</u>	<u>Bahrainis</u>	<u>%</u>	<u>Non-Bahrainis</u>	<u>%</u>
All occupations	60,301	37,950	62.9	22,351	37.1
A-1: Professional and technical occupations, presumably requiring a Science/Maths based University Degree:	414	75	18.1	339	81.9
A-2: Professional occupations, presumably requiring a Fine or Liberal Arts Based University Degree:	1,462	675	46.2	787	53.8
B: Sub-professional and technical occupations, presumably requiring one to three years post-secondary education:	4,127	2,663	64.5	1,464	35.5
C-1: Skilled office occupations, presumably requiring secondary completion:	9,564	7,671	80.2	1,893	19.8
C-2: Skilled manual occupations, presumably requiring pre-vocational training and/or classroom related instruction:	17,681	10,617	60.0	7,064	40.0
C-3: Semi-skilled manual occupations, presumably requiring on-the-job training:	13,152	7,668	58.3	5,484	41.7
D: Unskilled occupations requiring no training:	12,048	6,937	57.6	5,111	42.4

Source: Statistical Bureau, Census 1971, Form No.24.

d) Skill Endowment.

Before noting the differences in educational attainment of any of the four groups under discussion, it is worth establishing the value of an analysis of educational attainment. Educational attainment does not define the qualifications, ability or skill level of a workforce, since there is no reference to experience, age, or on-the-job training included. However, such a study assists analysis of skill endowment, in so far as it shows the educational background of economically active persons.

The few women who do work are better qualified than the average "active" man. 63% of active Bahraini women have Primary completion or higher compared to 31% of active Bahraini men, shown on Table 4.67 in the Appendix. The phenomenon of only better qualified women working was also noted for Kuwait.

Comparing Bahraini and non-Bahraini men (who comprise 95% of the workforce), the former emerge as having a larger proportion of their total literate, and the latter appear to have a larger proportion in the well qualified bracket. 69% of Bahraini men have not completed Primary education, compared with 74% of non-Bahraini men. 1.8% of Bahraini men have completed Secondary, but not Tertiary, while 8.8% of non-Bahrainis have done so.

Overall, the non-Bahraini contingent do not have noticeably different educational attainments, except at the highest level, where the numbers involved are small. Hence, whatever non-Bahrainis bring to sell in the labour market, it is apparently not formal educational qualifications. To pursue this point in more detail we should consider the educational attainments of each nationality within particular occupational groups. Table 4.27 shown below is a summary of Table 4.71 in the Appendix, which gives the distribution in each occupational group of educational qualifications of Bahrainis and non-Bahrainis. Table 4.27 shows the proportion of Bahrainis in each occupational group that have

the requisite educational qualifications.

TABLE 4.27. PROPORTION OF WORKFORCE POSSESSING APPROPRIATE
EDUCATIONAL QUALIFICATIONS BY OCCUPATIONAL GROUP AND NATIONALITY, 1971.

<u>Occupational Group</u>	<u>Bahrainis</u>	<u>Non-Bahrainis</u>
A-1: Professional and Scientific occupations usually requiring a Science/Maths based University Degree:	100.0	99.1
A-2: Professional occupations usually requiring an Arts based University Degree:	23.4	68.0
B: Sub-professional and technical occupations usually requiring one to three years post secondary education:	12.6	46.6
C-1: Skilled office occupations usually requiring secondary completion:	14.6	50.3
C-2: Skilled manual occupations usually requiring vocational and/or training related classroom instruction:	14.6	17.6
C-3: Semi-skilled manual occupations usually requiring literacy, plus on-the-job training:	7.3	12.6
D: Unskilled manual occupations not requiring special education or training:	13.7	3.4

Source: Abstracted from, Socknat, J., Projections of Manpower Demand and Supply, 1971-1986. Ford Foundation, 1974, Table 7, p.97.

Table 4.27 shows that with certain exceptions in the Professional groups, neither nationality generally possesses the requisite qualifications for the jobs they are holding. Hence there is not a great deal of purpose in attempting to draw detailed comparisons between Bahrainis and non-Bahrainis. However in "blue-collar" occupations both Bahrainis and non-Bahrainis lack the requisite qualifications for their jobs, and if anything, Bahrainis are slightly better qualified overall in those groups. This underlines the point that non-Bahrainis in "blue-collar" jobs bring some qualification with them which enables them to accomplish their work, but not a formal education.

Table 4.28 shown below provides evidence which suggests that experience is a relevant factor. Evidently a larger number of non-Bahrainis are found in the age range "25-44" than Bahrainis. The age

distribution of the Bahraini workforce is relatively normal, having some very old persons, and some young. However, 63.5% of non-Bahrainis are found in the "25-44" age range compared with 46% of Bahrainis. This suggests that non-Bahrainis in "blue-collar" jobs may be older than Bahrainis, and have acquired their skills either through on-the-job training or simply through "learning-by-doing".

TABLE 4.28. AGE DISTRIBUTION OF WORKFORCE IN BAHRAIN,
BY NATIONALITY, 1971.

	<u>Bahrainis</u>	<u>%</u>	<u>Non-Bahrainis</u>	<u>%</u>
Total	37,378	100.0	22,212	100.0
<u>Age</u>				
14	174	0.5	65	0.3
15-19	3,731	10.0	1,219	5.5
20-24	5,815	15.6	3,254	14.6
25-44	17,049	45.6	14,106	63.5
45-64	9,319	24.9	3,305	14.9
65+	1,290	3.4	263	1.2

Source: Statistical Bureau, 1971 Census, Form 9, pp. 5 - 12.

c) Employment by Establishment Size.

Since Bapco first commenced its exporting and refining, the numbers it employed accounted for a very sizeable proportion of the labour market, and practically all "manufacturing" employment before 1965. Since then, the same pattern has remained in so far as the large majority of all employment has been concentrated within a few companies. In 1962, companies employing fifty persons or more accounted for 86% of all "industrial" employment, as Table 4.29 shows

TABLE 4.29. DISTRIBUTION OF EMPLOYMENT IN THE MANUFACTURING
SECTOR BY ESTIMATED SIZE - 1972.

<u>0-4</u>	<u>5-49</u>	<u>50+</u>	<u>All</u>
34	928	5,791	6,753

Source: Calculated from Ministry of Finance, Industrial Planning 1973, Appendix I.

A separate survey, made in 1974, of all private establishments presented a similar picture. It showed that 69.5% of all employment was found in companies employing 500 persons or more.

TABLE 4.30. DISTRIBUTION OF EMPLOYMENT BY ESTABLISHMENT SIZE, 1974.

<u>Size</u>	<u>1-9</u>	<u>10-19</u>	<u>20-49</u>	<u>50-99</u>	<u>100-499</u>	<u>500+</u>
Total:	80	72	555	306	2,706	8,486
%:	0.7	0.6	4.5	2.5	22.2	69.5

Source: Ahuja, Y.L., Manpower Survey, Bahrain, 1974.

This result and the information on Table 4.30 should be regarded with scepticism. There is reason to doubt the accuracy of coverage in the 1974 Survey, especially amongst establishments with less than 20 persons. In several respects the 1974 Survey is at a distinct variance with the findings of the 1972 Survey. The latter appears to have been very much more thorough than the 1974 Survey, which was conducted by post.

We can, though, accept the general point that much of all employment is found in large firms in the industrial sector. In 1974 Alba and Bapco together employed 6,701 persons, which would have represented 77% of the entire manufacturing sector employment of 1971. Obviously it would have been less than that in 1974, but this figure does suggest that these two employers have a major impact on the domestic economy. One advantage of the traditionally high concentration of employment in two or three firms has been that these companies have been able to afford to provide training, and to provide more training than was strictly necessary for their own needs. It is often stated in Bahrain that Bapco 'trained everyone' and this, until quite recently, was probably a realistic guide to the coverage of Bapco's training programme.

f) Wages and Salaries.

We have noted some factors of Bahrain's employment structure which distinguish it from that of Kuwait or Qatar. Bahrainis work in

all sectors and in all types of jobs. The limited data we have on wages and salaries goes some way to explaining these differences. Table 4.31 shows wages and salaries of selected occupations in different sectors.

TABLE 4.31. WAGES FOR SELECTED OCCUPATIONS FOR BAHRAINIS, 1974.

<u>Sector</u>	<u>Occupation</u>	<u>Salary (B.D. per month)</u>
Manufacturing (Alba)	Production Supervisor & Foremen	192
	Clerical Supervisor	125
	Furnace men	115
	Auto Mechanics	125
	Typists	125
Banking	Supervisor	147
	Secretary	112
	Typist	65
	Driver	55
	Cashier	80
Construction	Bricklayer and Construction Worker	43
Government	Secondary Headmaster	150
	Secondary Teacher	90
	Primary Teacher	70

Source: Private Sector: Ahuja, Y.L., Manpower Series, Ministry of Labour and Social Affairs, October 1974.
Government Sector: Information supplied by the Under-Secretary for General Education, Hassan Al-Mehri.

It is evident from the above table that the "Manufacturing" sector (principally Alba) pays very good rates, if not the top rates in Bahrain. Not included here are "oil industry" rates of pay, nor much detail on government rates of pay. From the evidence we have of government rates, it seems that they pay very poorly. A university graduate only earned B.D. 90 per month in 1974 as a teacher, which is low comparatively. Bahraini nationals participate in relatively large numbers in industrial ventures, and in this they appear to be unique in the Gulf. In 1974 they accounted for 90% of all employment in Bapco and Alba. While this is largely explained by high wage rates, it is probably also true that the opportunity of further training and a career within the company attracts

Bahrainis. The argument that it is pay which motivates Bahrainis to work in industry is strengthened by the findings of a survey of Bahraini personal income. When these are compared with the findings of a slightly different "Household Income" survey in Kuwait, the difference between Bahrainis and Kuwaitis incomes is seen as considerable.

Table 4.32 shows that compared to Kuwaitis, Bahrainis are poor. But whether they are poor in absolute terms can only be determined by a knowledge of how high the cost of living is in Bahrain. We have two measures of this; the Bapco Survey of Employees Expenditure Pattern and figures for inflation in Bahrain over the last three years.

TABLE 4.32. DISTRIBUTION OF BAHRAINIS PERSONAL INCOME AND KUWAITI HOUSEHOLD INCOME IN 1973 (IN B.D./MONTH).

Bahrainis

Income Group:	0-50.	51-75.	76-100.	100-150.	150-200.	200-300.
Distribution:	1%	21%	55%	15%	7%	1%

Kuwaitis

Income Group:	<133	136-200	201-265	266-332	333-398	399-532	>533
Distribution:	12.1%	21.3%	24.2%	16.1%	8.3%	7.0%	11.0%

Source: Bahrain: Llewelyn-Davies, Weekes, Forestier-Walker, National Housing Policy Study, 1974.

Kuwait: Stanford Research Institute, The Effect of Government Salary Increases on prices in Kuwait, Planning Board, Kuwait, Statistical Appendix, 1974.

The Bapco Survey (Table 4.33) shows that necessities (housing, food, clothing and medical expenses) account for 76% of earnings. The remainder is available to be spent on "luxuries" (24%), and this is possibly the lowest level for nationals in any of the small Gulf States.

Bahrain's domestic inflation rate has been running at European levels. Table 4.34 gives inflation rates of individual items and the composite index shows inflation running at 25% in 1974/75.

TABLE 4.33. BAPCO SURVEY OF EMPLOYEES' EXPENDITURE PATTERN 1973.

<u>Item</u>	<u>Proportion of Income Spent.</u>
Food	51%
Housing	17%
Clothing	7%
Medical	2%
Soft drinks and tobacco	4%
Durable goods	6%
Miscellaneous	8%
Transport	5%
Total	100%

Source: Quoted in Llewelyn-Davies, Weekes, Forestier-Walker, 1973, op.cit.

The data we have on wages and salaries suggests that Bahrainis are not paid particularly well, and after essential items have been purchased, their disposable income is small. When the effects of inflation have been taken into account, Bahrainis may well have become less well off in real terms over the past few years. The high incidence of strikes (including one at Alba that virtually closed the entire operation) suggests that this may be so.. Against this background, it would be surprising if the high wage rates paid by the industrial sector did not attract Bahrainis. Moreover, there appears to be an explanation here for the absence of Kuwaitis in their industrial sector. Kuwait's industrial sector does not attract Kuwaitis because it neither pays particularly well (relatively) nor are there many poor Kuwaitis driven to accept any employment available.

TABLE 4.34. INFLATION RATES OF SELECTED ITEMS IN BAHRAIN, 1971/72 TO 1973/74 (IN PERCENTAGES).

<u>Item</u>	<u>1971/72</u>	<u>1972/73</u>	<u>1973/74</u> ⁽¹⁾
Food	6	14	29
Soft drinks	1	2	10
Housing	1	32	36
Durables	2	7	16
Clothing	12	12	16
Transport	5	4	12
Miscellaneous	5	4	13
Medical	2	54	3
Composition Index	5	14	25

Note (1): Based on first quarter of 1973/74.

Source: Llewelyn-Davies, 1973, op.cit.

4.7. Interaction Between Economic Development and Employment.

Economic development and employment have been closely linked in Bahrain. The distribution and pattern of employment reflects the type of development Bahrain has experienced. The relatively small proportion of total employment which non-Bahrainis absorb is a reflection of Bahrain's shortage of surplus funds which might be used to pay expatriate labour for jobs which Bahrainis could be trained to do. While economic growth has been constrained by the time it has taken to train, Bahrain has achieved total growth and development. The most recent major development, the aluminium smelter, was successful partly because of the pool of skilled labour available. The training efforts of Bapco over forty years and the diminishing employment opportunities in the same company contributed to that supply.

The two major projects of the last five years, the smelter and the dry dock, have absorbed the surplus of labour on the island, and in recognising this the government has decided that these two are sufficient "large scale" type projects for the next five years.⁵⁵ From now on, smaller scale light industries which are related to existing activities are planned. The extrusion plant, the window and door frames plant and the paint plant all reflect the scale and type of activity envisaged.

While the scale and pace of Bahrain's development has been smaller and slower than Kuwait's, it has accomplished what Kuwait has not: a proliferation of economic activities which do not rely on oil revenues, which provide productive employment for Bahrainis and which have the capacity to earn foreign exchange. In doing this she has come closer to realising the aims of her economic development than Kuwait has, so far.

PART III.QATAR.Introduction

Qatar's small population and relatively large oil reserves place her economy nearer Kuwait's than to Bahrain's. Until very recently economic development consisted in the expansion of social services and the country's infrastructure, in order to raise the standard of living of the population. Up to 1971 progress in this sphere was moderate, although finance and foreign exchange were relatively abundant. Following a transfer of power in 1971, rapid development occurred on two fronts; first, the improvements which had been initiated in social services were supplemented, and by 1975 were largely complete; second, the government decided that Qatar's exclusive dependence on one source of income, her oil, was not ideal in the long run. A programme of diversification of the economy through industrialisation was initiated. This has involved fertilizer plants, a new cement plant, a steel mill, and possibly an aluminium smelter.

The Census of 1970 showed that the economy depended substantially on expatriate labour. Since then their number has probably risen dramatically and without their continued assistance, Qatar's plans to diversify will founder. No official concern has been voiced over the swelling ranks of non-Qataris, but if the experience of Kuwait is at all relevant, some caution over the more large scale projects, such as the Steel Mill may be exercised in future. Without any such restraint, the expatriate population, and their share of the workforce will continue to increase and to dwarf the Qatari community still further.

4.8. Characteristics of Economic Development.

a) The Pre-Oil Era - 1949.

Although the first oil well was sunk in 1938,⁵⁶ the Second World War caused its development to be halted, and oil was first exported in 1949.⁵⁷ That year, for the purposes of our study, marks the end of the 'pre-oil' era.

Qatar's indigenous activities in this part of the 20th Century were limited by the relative inaccessibility of the coast to sizeable ships, the lack of water, the harsh climate and the aridity of the soil. Fishing and pearling provided the main form of employment, and in 1907, Qatar's 817 dhows accounted for a third of the entire pearling fleet.⁵⁸ The Japanese cultured pearl had the same effect on economic life in Qatar as it had in Kuwait.

Qatar's population, mostly nomadic Bedouin, did not have either the entrepot background of Bahrain, nor the trading experience of Kuwait. Yet another difference between Qatar and the other two is that although geographically much larger, she has many fewer people.

b) The Post-Oil Era, 1949+.

When oil revenue was first received in 1950⁵⁹ there was no body in existence to administer the essential functions of a modern government. The ruling Al-Thani family employed a British adviser, Mr. Cummins, to direct and assist with government responsibilities, rather as Mr. Belgrave was employed in Bahrain. The allocation of oil revenues in the early years appears to have been a quarter to the ruling family, a third to the government and the rest to the State Reserve. In the absence of any government to speak of, the actual division was between the Ruling Family and the State Reserve.

Table 4.35 shows the allocation of the oil revenue between 1950 and 1952.

TABLE 4.35. THE ALLOCATION OF THE OIL REVENUE, 1950-1952 (000 Q.R.).

<u>Allocation</u>	<u>Amount</u>	<u>Percentage</u>
Privy Purse	18,727	25.0
Government and Ruling Family	23,774	31.7
State Reserve	32,393	43.3
Total Oil Revenue	74,894	100.0

Source: Al-Kuwari, 1974, op.cit., p.151.

By 1954 there were a total of 178 persons on the entire government payroll.⁶⁰ Oil revenue increased slowly to 1956 and remained constant until 1964, when Qatar's second concessionary "Shell Qatar" began to pay revenues. Concern at Qatar's very slow rate of economic development led to a palace coup in 1961, when Sheikh Ali Al Thani was deposed by Sheikh Ahmad bin Ali al-Thani. For exactly similar reasons, he was deposed in 1972 by the present ruler, Sheikh Khalifa bin Hamad al-Thani. Even after Sheikh Ahmad's accession in 1961 progress was exceptionally slow by Gulf standards. Large payments to the deposed Sheikh and to the ruling family left approximately 50% of oil revenue for the government. Lack of leadership and direction meant that little was accomplished in the way of economic development before 1967. In that year, acute water shortages forced the government to invest in further water distillation units.⁶¹

By 1970, twenty years of oil revenue had been received, and only two significant enterprises were in existence, the Cement Plant and Qatar Fisheries Company. There were plans for a fertiliser plant and a private flour mill, largely the result of the efforts of the then Prime Minister, Sheikh Khalifa. The latter's accession to power in 1971 was made with the general consent of the Al-Thani family, and marked the moment of Qatar's commitment to industrial development. Increasingly concerned over Qatar's complete dependence on oil, alternative sources of income have been sought. Industrialisation, using gas either as a cheap form of fuel, or as a raw material, have been seen as an answer. A steel plant has been commissioned, and an aluminium plant is under consideration.

c) The Development of the Oil Industry.

The first shipment of oil was made in 1949 from the Sukhan field in the west of the country, by Qatar Petroleum Company (Q.P.C.), a subsidiary of Iraq Petroleum Company. Q.P.C. was given the "on-shore" concession, and in 1954 Shell Qatar Company was given the "off-shore" concession. Shell Qatar first exported oil in 1964.⁶²

Since 1964, oil production has risen steadily from 181,900 b.d. to approximately 500,000 b.d. in 1974. Table 4.36 shows the growth of production and revenue from 1963, and the Qatari government take per barrel.

TABLE 4.36. OIL PRODUCTION AND REVENUE IN QATAR, 1963 TO 1975.

<u>Year</u>	<u>Production (b.d.)</u>	<u>Revenue (\$ m.)</u>	<u>Take/Barrel (\$)</u>
1963	181,900	59.5	0.9
1964	202,500	65.5	0.9
1965	219,220	68.5	0.9
1966	277,300	92.1	0.9
1967	309,580	101.8	0.9
1968	327,260	109.5	0.9
1969	346,820	115.2	0.9
1970	345,140	122.0	1.0
1971	404,020	197.8	1.3
1972	465,240	286.8	1.6
1973	546,000	419.7	2.1
1974	504,000	1396.9	7.6
1975	440,000	n.a.	
1976	610,000 ¹		

Note (1): Relevant to January 1976 only.

Source: Middle East Economic Digest, 13/2/76, and Middle East Annual Review, 1975/76, Middle East Review Company, England.

In recent years the effect of an improving take per barrel is apparent. In 1975 output fell as the government and the oil companies were involved in negotiations over the price of oil.

Qatar's oil reserves are currently (1976) placed at 6,000 m. barrels.⁶³ An extraction rate of .5 m.b.d. would provide Qatar with thirty-three more years of oil revenue. However, her reserves are probably much higher than the figure mentioned.

Reserves of natural gas, estimated at 50 trillion cubic feet, place the country among those with the highest gas reserves. Much of Qatar's

industrial planning is orientated to using them.⁶⁴

In 1975 a small refinery came on stream, with a capacity of 6,000 b.d. More significant is Qatar's \$ 63 m. Liquid Natural Gas Plant, completed in the same year. With a capacity to handle 800,000 tons annually, it is the largest in the Gulf. In 1972, Qatar National Petroleum Company was formed to supervise the distribution of petroleum products in Qatar and the L.N.G. Plant. A new company, Qatar Gas Company, was recently formed, licensed to handle and process Qatar's three field of off-shore gas. To accomplish this, a second L.N.G. plant is under consideration.⁶⁵

In addition to these activities, three related plants are envisaged. An ethylene and polyethylene plant, with an output of 300,000 tons/annum, of ethylene was commissioned in 1974. A pharmaceutical and cosmetics plant is to be built. Qatar Plastics and Paper Products Company was formed in 1972 with a view to manufacturing paper and plastic bags for use in the fertilizer plant, and also for export.⁶⁶

d) Government Finance:

Government revenues consisted, up to 1970, almost entirely of oil revenues and associated benefits, such as interest from the Revenue Fund. Public expenditure allocations from 1966 to 1970 are shown on Table 4.37

TABLE 4.37 ALLOCATION OF GOVERNMENT EXPENDITURE, 1966 - 1970.

<u>Allocation:</u>	<u>Amount (000 Q.R.)</u>	<u>%:</u>
Current Expenditure	779,005	32.8
Capital Expenditure	445,425	18.7
Ruling Family	948,557	40.0
Land Purchase	200,920	8.5
Total	2,373,907	100.0

Source: Calculated from Al-Kuwari, 1974, op.cit., Table 6.5, p.156.

The government share of the total was a little more than 50%, and current expenditure took the largest part of that. The Land Purchase scheme, similar in design to that of Kuwait, began in the mid-sixties.

Allocations to the State Reserve were made from budget surpluses. The State Reserve had, by 1971, received payments (on and off) for twenty years, and stood at £72.9 m.⁶⁷ It is really only since 1972 that Qatar has had an official "budget", and the details of it from that year to 1974/75 are shown on Table 4.38.

TABLE 4.38. GOVERNMENT BUDGET 1972/73 TO 1974/75 (Mn. \$).

<u>Revenue</u>	<u>1972/73</u>	<u>1973/74</u>	<u>1974/75</u>
Oil	286.8	419.7	1396.9
Other	32.7	27.0	30.8
Total	319.5	446.7	1427.7
<u>Expenditure</u>			
Current	174.4	193.8	259.9
Capital	59.0	64.6	150.8
Aid	6.7	92.7	90.9
Other	8.4	49.2	-
Total	248.5	400.3	501.6
Balance	+ 568.0	+ 46.4	+ 926.1

Source: Middle East Annual Review, 1975/76, 'Qatar', p.212.

Capital expenditures have increased more rapidly than current, and it is reported that in 1975/76 capital expenditure exceeded current expenditure. Despite the doubling of government expenditure over this two year period, the surplus has risen from \$ 568 m. to \$ 926 m. Even if oil prices had not increased so dramatically after 1972/73, by being less generous in the field of international aid and by increasing output, Qatar could still have balanced her budget.

e) Infrastructure.

The rate of increase of water distillation capacity in Qatar is a good indicator of her economic development. A small unit was installed in 1954 capable of producing 130,000 gallons/day. Before then, the inhabitants had relied on the limited amount of drinking water that underground wells produced. By 1959, Qatar's total distillation capacity was extended to 430,000 gallons/day, and by 1967, it stood at one million gallons/day. In that year, and in 1968, severe shortages of drinking

water occurred, and two one-million gallon/day units were commissioned, raising total output by 1969 to 3 million gallons/day. Total capacity quickly increased to 7 million gallons/day in 1971, and 11 million gallons/day in 1975.⁶⁸ The increases in installed capacity after 1971 are indications of the new sense of urgency which the government took in accomplishing basic industrial projects.

Qatar's first large electricity generator was completed by 1963, at Ras Abu Aboud, and had a total generating capacity of 3 million watts. In 1967 a 15 million watt unit was added, with additional units in later years to create a total capacity of 90 million watts by 1973.⁶⁹

In 1970 the road link to Saudi Arabia was completed, thus improving Qatar's possibilities for entrepot trade, and quickening the rate of overland imports from Europe. In the same year, the Doha port extensions were completed, after seven years work. A deep water channel was dug through the coral reef, and the capacity of the port is now four medium-sized ships. Previously goods were unloaded by lighters. The new port enhances the opportunities provided by improved land communications of developing some entrepot trade.

f) Industrial Development.

Qatar's main industrial achievement before 1971 was the Cement Plant. Qatar Cement Company was formed in 1965, and was wholly government owned. By 1969, 300,000 tons per annum of cement were being produced. Located in the industrial zone at Umm Bab, on the west side of the country, along with Qatar Petroleum Company's oil installations, 75% of the output is exported. There are plans to double the output of the plant and extensions have been made for a unit to produce asbestos pipes and corrugated sheets.

Possibly the most important "non-oil" industrial activity is the Fertiliser Plant, which came on stream late in 1972. Built in Umm Said at a total cost of \$ 51 m., the government has a 63% shareholding, and Norsk Hydro, a Norwegian company, staffs, manages and markets the output of the plant. The plant is powered by natural gas turbines and in 1976 the government announced her intention of doubling the capacity of this plant.⁷⁰

The Qatar National Fishing Company is also a "non-oil" enterprise, but a small one. Formed in 1966, the Company catches and refrigerates shrimps which are exported to Europe, Japan and America. A falling world shrimp price in 1971 caused the company to make a loss in that year. However, profitability was restored the following year. Only about twenty Qataris work for the company, all of whom are employed at the shrimp packing factory on-shore.⁷¹

The Qatar Flour Mills Company, based at Umm Said, was formed in 1969 by a group of private Qatari merchants. By 1972 the plant was complete and has a capacity of 100 metric tons/day. The local market demand is probably only 60% of that total, and in 1975 it was operating at 60% capacity. Initially it was designed to produce flour for export as well as for domestic consumption, but has not done so to date.⁷²

In 1970, Law No.5 indicated the government's intention to industrialise the country, and the Ministry of Agriculture and Industry was empowered to formulate a general policy of industrialisation. Planning has been rather sporadic, though with a determined aim of industrialisation via petrochemicals, plastics and fertilisers. More recently plans have been announced for a Steel Mill, with a capacity of 400,000 tons per annum which will be in operation by 1977. The 1976 budget includes \$ 375 m. allocated to "heavy industry" and besides the Steel Plant, a

\$900 Petrochemical Complex, \$ 200 Gas Liquifaction Plant, Cement Plant, and Fertiliser Plant are envisaged. An Aluminium Smelter is under consideration. The motive behind these developments is to create a non-oil source of income. Endowed as Qatar is with cheap energy, and possessing surplus capital, energy intensive and capital intensive projects seem appropriate. In a limited sense, they may be, but it is inevitable that these projects are operated by expatriate personnel. The cost of maintaining expatriates and their impact on the social structure of Qatar may lead to a reconsideration of some of these projects.

g) Agriculture.

Somewhat perversely, Qatar possesses a significant, if limited, agricultural sector. In the northern part of the country there is a two-foot deep layer of clay soil, and limited supplies of underground water. An experimental agricultural station was set up in 1963, using 125 acres. Today, Qatar is self-sufficient in vegetables, and in 1970 5,000 acres were under cultivation. Lucerne, tomatoes, dates, figs and aubergines are grown, and there is a small livestock section.⁷³

If agriculture is to be developed, there are several difficulties to be overcome, not least the climate and lack of water. Equally important is the drain on the workforce caused by higher wages at Umm Said. A poultry farm at Umm Said has just been opened, with a capacity of 12 million eggs per year and 1 million chicks per year.⁷⁴

4.9. Future Economic Development.

a) Development Options.

(i) Rentier State.

In common with Kuwait, Qatar possesses large oil reserves, and has a small indigenous population. The same resources that would enable Kuwait to become a rentier state are also present in Qatar. Having a much smaller indigenous population than Kuwait, the argument seems even more persuasive for Qatar than for Kuwait.

(ii) Industrial Development.

Industrial development is seen as the means whereby Qatar will change from an oil-dependent economy to a self-sustaining and developed one, which does not rely exclusively on oil for its income. This view is based on the assumption that a continuing supply of cheap fuel is available, and that it will continue to be possible to purchase labour to man industrial ventures. The second of these assumptions may, in the short run, hold, but prevents Qatar with a variety of social and political problems which may, in the end, lead to the termination of industrial concerns, and a change of direction in economic development. Since there is no official discussion or apparent recognition of the problems associated with industrial development based on expatriate labour, we can only point out the pitfalls of this type of development and its uncertainty.

(iii) Agriculture.

If an aim of Qatar's economic development is to create non-oil sources of income, then the development of agriculture presents considerable potential. Already self sufficient in vegetables, Qatar has the capital to make further investments in this sector, to increase output by developing her intensive livestock production. With her agricultural experience, fertile soil and significant supplies of natural

water, this is one sector where the long run return would seem to be, in comparison with say the Steel Mill, extremely good.

4.10. Labour Market and Employment Development.

a) Data Availability.

Of the three countries in our study, Qatar has the least available data. The only Census was taken in 1970, and no subsequent ones are planned. Qatar, unlike Bahrain or Kuwait, does not publish a Statistical Abstract containing even rudimentary data. "Budgets" have only been announced since 1972. We are therefore obliged to use only the 1970 Census, some limited employment data collected by the author on field trips, and occasional publications of local Companies.

b) Employment Situation in 1970.

Qatar's population has a majority of expatriates, as Chapter 3 showed. Table 4.39 shows that they absorb a large share of the workforce, 93% in 1970.

TABLE 4.39. EMPLOYMENT BY NATIONALITY, 1970.

<u>Nationality</u>	<u>Number</u>	<u>%</u>
Qatari	8,168	16.9
Non-Qatari	40,222	83.1
Total	48,390	100.0

Source: The First Population Census of Qatar, 1970, Qatar, Table 7.

1970 was, as we noted earlier, the year when Qatar completed her major infrastructural activities, and was beginning to diversify the economy. However, even then Qatar was dependent on a sizeable expatriate workforce. The crude participation rate in 1970 was 18.1% for Qataris, and 60.8% for non-Qataris (Table 4.40). This confirms that most non-Qataris travel to Qatar for the purpose of employment, as was suggested in Chapter 3. If we take the estimates of Qatar's population in 1975 (made in Chapter 3) then we find that by 1975 Qataris are outnumbered by $7\frac{1}{2}$ to 1 in the workforce, assuming similar participation rates.

TABLE 4.40. POPULATION AND WORKFORCE BY NATIONALITY, 1970 & 1975 (ESTIMATE).

	<u>1970.</u>		
	<u>Qatari</u>	<u>Non-Qatari</u>	<u>Total</u>
Population	45,039	66,094	111,133
Workforce	8,168	40,222	48,390
% Active	18.1	60.8	43.5

	<u>1975.</u>		
	<u>Qatari</u>	<u>Non-Qatari</u>	<u>Total</u>
Population	52,721	117,279	170,000
Workforce	7,561	71,371	80,932
% Active	18.1	60.8	47.6

Source: Census 1970, Qatar, Table 3.

A closer inspection of participation by sex and age reveals that amongst Qataris, very few women work, whilst 34.8% of all men do so. However, more than one half of all Qataris are ineligible for work, being younger than 16 or older than 59. Table 4.41 shows that if the male workforce is 82.3% of all Qatari men aged between 15 and 60. The Qatari workforce is small because Qatari women generally do not work, and because the number of Qatari males eligible to work is limited (most of them being too young).

TABLE 4.41. TOTAL POPULATION, PERSONS AGED 15-59, AND WORKFORCE, BY SEX, AGE AND NATIONALITY IN 1970.

	<u>MEN.</u>	
	<u>Qataris</u>	<u>Non-Qataris.</u>
Population	22,668	49,046
Workforce	7,884	39,113
%	34.8	79.7
Population Aged 15-59.	9,577	39,356
Workforce	7,884	39,113
%	82.3	99.3

	<u>WOMEN.</u>	
Population	22,371	27,048
Workforce	284	1,109
%	1.2	6.5

Source: Census 1970, Qatar, Tables 1 and 7.

The picture for non-Qataris is very similar; almost all non-Qatari men work, only 6.5% of non-Qatari women do so. If the number of active non-Qatari men is put as a percentage of the non-Qatari

working age population it is very high, 99.3%.

Our analysis so far has implied that non-Qataris are found in Qatar because there is an absolute shortage of labour at all skill levels. The evidence shown on Table 4.42 concerning educational attainment adds to our knowledge of the demand for labour, by showing that there is a demand for labour, both manual and unskilled, and highly qualified labour also.

TABLE 4.42. ACTIVE POPULATION BY EDUCATIONAL ATTAINMENT
AND NATIONALITY. 1970.

<u>Educational Attainment</u>	<u>Qatari</u>	<u>%</u>	<u>Non-Qatari</u>	<u>%</u>
None	5,069	62.1 ,	27,279	67.8
Primary or Al Kuttab	2,169	26.5	6,755	16.8
Secondary	657	8.0	4,142	10.3
Technical	193	2.4	557	1.4
University	80	1.0	1,489	3.7
Total	8,168	100.0	40,222	100.0

Source: Census 1970, Qatar, Table 7.

Evidently in 1970 Qatar lacked well trained nations, and hence 1,489 expatriates with university degrees were employed. Similarly, if one assumes that illiterate persons fill manual or unskilled jobs, then 27,279 expatriates were employed for those jobs in 1970, three times the entire Qatari workforce.

If we consider the allocation of employment between economic sectors, a common "oil state" division is visible; little employment in the capital intensive oil industry (4.6%), considerable employment in government and other services (40.6%). "Construction" and "Wholesale and Retail Trade" each account for a sixth of total employment.

Qataris and non-Qataris are similarly distributed between economic sectors, as Table 4.43 shows, except that Qataris specialise in the oil industry and avoid the construction sector. They are slightly under-represented in the "Wholesale and Retail Trade" sector, a fact which reflects the nomadic origins of Qataris (in distinction to the trading

experience of Kuwaitis).

One statistic of Table 4.43 suggests that despite their outward appearance of similarity in some respects, Kuwait and Qatar have labour markets with differing characteristics. The number of Qataris engaged in "Manufacturing, Mining and Quarrying" is 1,825; this represents 22.4% of all employed Qataris, and Qataris absorb 34.8% of all jobs in this sector, double their overall representation in the workforce (16.9%).

TABLE 4.43. EMPLOYMENT BY ECONOMIC SECTOR AND NATIONALITY, 1970.

<u>Economic Sector.</u>	<u>Total</u>	<u>%</u>	<u>Qataris</u>	<u>%</u>	<u>Non-Qataris</u>	<u>%</u>
Agriculture & Fishing	2,070	4.3	86	1.0	1,984 (95.8)	4.9
Manufacturing, Mining & Quarrying	5,242	10.8	1,825	22.4	3,417 (65.2)	8.5
Construction	7,785	16.1	207	2.5	7,578 (97.3)	18.8
Oil Industry	2,209	4.6	1,259	15.4	950 (43.0)	2.4
Wholesale & Retail Trade:	7,885	16.3	880	10.8	7,005 (88.8)	17.4
Banking	302	0.6	10	0.1	292 (96.6)	0.7
Transport & Communications	3,226	6.7	665	8.0	2,571 (79.7)	6.4
Government Service	6,172	12.7	1,391	17.0	4,781 (77.4)	11.9
Other Services	13,499	27.9	1,855	22.8	11,644 (86.2)	30.0
Total	48,390	100.0	8,168	100.0	40,222 (83.1)	100.0

Source: Census 1970, Table 16.

Before attempting to examine this problem further, two points should be noted. The first is that in 1970, besides the Cement Plant, there was very little "Manufacturing, Mining and Quarrying". The occupations listed under this activity largely consist of "Tailors, Shoemakers, Textile and Leather Workers", "Woodworkers" and a very large number of "General Labourers and Freight Handlers". So Qataris included here are not industrial production line operatives. The second point, an extension of the first, is that a close examination

of the payroll of the Mechanical Engineering Department shows a large number of Qataris in the total, 266 out of 372.⁷⁵ However, more than 40% of Qataris are either "Vehicle Drivers" or "Timekeepers", "Gatekeepers" or "Watchmen". In other words, many of the Qataris included under "Manufacturing, etc." may be found in service industry types of occupations, e.g. drivers.

Table 4.44 shown below shows that nevertheless, some Qataris are working in skilled or unskilled manual jobs, and not just as "Drivers". 2,499 Qataris are entered under "Craftsmen, Production and Related Workers", an occupational group which absorbs 30.6% of all Qatari employment.

TABLE 4.44. EMPLOYMENT BY OCCUPATION AND NATIONALITY, 1970.

<u>Occupation</u>	<u>Total</u>	<u>%</u>	<u>Qatari</u>	<u>%</u>	<u>Non-Qatari</u>	<u>%</u>
Professional & Technical Workers	2,581	5.3	478	5.8	2,103 (81.4)	5.2
Administrative & Executive Workers	739	1.5	204	2.5	535 (72.9)	1.4
Clerical & Related Workers	8,360	17.2	2,005	24.6	6,355 (76.0)	15.8
Farmers & Fishermen	1,992	4.1	77	0.9	1,915 (96.1)	4.8
Transport Workers	4,438	9.2	1,517	18.6	2,921 (65.8)	7.2
Craftsmen, Production and Related Workers	19,284	39.8	2,499	30.6	16,785 (87.0)	41.6
Service Workers	9,469	19.7	1,316	16.1	8,153 (86.1)	20.3
Other Occupations	1,527	3.2	72	0.9	1,455 (95.2)	3.7
Total	48,390	100.0	8,168	100.0	40,222 (83.1)	100.0

Source: Census 1970, Table 17.

Before dealing with the other information in Table 4.45, we should consider the individual occupations in "Craftsmen, Production and Related Workers". They are shown here in Table 4.45 for Qataris only. Table 4.45 shows that out of a total of 2,499, general labourers and freight handlers account for 50%, which leaves the other 1,251 working at a higher skill level. Our problem then is why, in an oil rich state, which

has very few "nationals" are so many of them working in unpleasant and possibly unremunerative employment? To some extent the answer may lie in the employer. Shell Qatar Company employed 432 Qataris in 1975, 367 of them (85%) in manual occupations, as Table 4.46 shows.

TABLE 4.45. QATARI EMPLOYMENT BY OCCUPATION IN OCCUPATIONAL GROUP "CRAFTSMEN, PRODUCTION AND RELATED WORKERS", 1970.

Craftsmen, Production and Related Workers	2,499
Tailors, shoemakers, textile and leather workers	14
Metal making and metal working operations	19
Non-electrical mechanics	350
Electricians and electrical workers	176
Woodworkers	123
Bricklayers	86
Other construction workers	86
Other craftsmen and production process operators	92
Stationary engine, excavating and lifting operators	233
General labourers and freight handlers	1,248

Source: Census 1970, Table 17.

TABLE 4.46. EMPLOYMENT IN THE SHELL (QATAR) COMPANY, 1975.

<u>Position</u>	<u>No. of Qataris.</u>	<u>No. of Non-Qataris</u>
Senior Staff	12	127
Intermediate Staff	53	147
Operatives	367	39

Source: Internal Paper entitled "Senior Staff, Intermediate Staff and Operatives as at 31st January 1974", Shell Company of Qatar.

This company pays possibly the highest rates in Qatar at the operative level, and Shell Qatar is a prestige company which provides a considerable amount of training. However, the fact that the high wage rates of Shell Qatar attracts Qataris is indicative of a similarity in the labour market and employment structure of Qatar and Bahrain. Qatar has not disbursed large sums of money through a Land Purchase Scheme to her citizens. She does not have a law guaranteeing employment in government service to nationals. In short, there are a number of relatively poor Qataris prepared to take manual employment in return for sufficient financial rewards. The Director of the Vocational Training Centre in Qatar confirmed this view, and added that Qataris might find

"technical" jobs challenging.⁷⁶ However, how much longer this situation will persist will presumably depend on the future policy for distributing oil revenues.

To return to Table 4.44, the distribution of employment by occupational groups is not uncommon. There are fewer "Professional and Technical workers" and "Administrative and Executive Workers" than "Clerical" or "Service" workers. The Qatari and non-Qatari distributions are reasonably similar. The largest occupational group amongst Qataris is "Craftsmen, Production and Related Workers", and we have already commented upon that.

c) Developments Post-1970.

With such limited data it is not possible to analyse the labour market and employment in Qatar in the detail that is desirable. One survey was undertaken of government workers in 1974, but the results appear to be unusable. The survey was a postal one, and the data appears to be inconsistent with the 1970 Census, even allowing for relatively rapid changes after 1970.

Possibly the most useful assessment of employment in 1975 is the general one, made on Table 4.40 which shows the total workforce to be 80,932 persons in 1975, and the Qatari share to be 11.8% (9,561 persons).

d) Summary

Working with the limited data available for 1970, we may conclude that:

- (i) the Qatari workforce is largely composed of men (96.5%).
- (ii) most Qatari men in the age range "15-59" are economically active; therefore the supply of Qatari labour is limited to male natural increase, unless Qatari women become economically active;
- (iii) a large number of active Qataris are illiterate (62.1%);
- (iv) expatriate migration to Qatar has been the result of three types

of demands: (a) a demand for labour at all levels, resulting from a shortage in absolute terms of Qataris; (b) a demand for unskilled and manual workers; (c) a demand for high level manpower resulting from a lack of qualified or experienced Qataris:

(v) the evidence to hand suggests that there has been a sizeable increase in the expatriate workforce, from 40,200 to about 71,000 between 1970 and 1975;

(vi) in common with Bahrainis and Kuwaitis, Qataris appear to be maximising their income. In the absence of a government employment programme, open to all nations or of a sizeable "Land Purchase Scheme", Qataris work wherever the financial rewards are highest. This leads to a significant number working in an industrial environment.

(vii) Qatar's economic development has been accomplished, as has Kuwait's, with the assistance of expatriate labour. Without the continuing residence of that group, her standard of living would fall dramatically.

4.11. Interaction Between Economic Development and Employment.

a) Capital Intensive Industry.

The nature of the oil industry and its pre-dominance in Qatar's economy has meant that much of Qatar's industrial development has been capital intensive. The proposed ventures, including the Liquid Petroleum Gas plants and the Steel Mill are also highly capital intensive. Nevertheless, the total employment generated by these enterprises is likely to be considerable, initially on account of their construction, and in the long term because of their scale.

b) Expatriate Labour.

The shortage of skilled manpower has led to the widespread use in all departments of the economy of expatriate labour. As yet the high cost of expatriate labour has not affected investment decisions.

c) Summary.

Qatar has pursued a course of economic development (particularly since 1971) which has little relation to her own manpower resources; interaction between policies to develop the economy and policies relating to employment has been minimal.

4.12. Conclusion.

Despite the differences between the size, population and wealth of the three countries in our study, all three see as the current aim of their economic development the diversification of the economy in order to be independent, to some extent, of oil. For Bahrain, the least affluent of the three, the incentive to achieve this is considerable; her oil production is rapidly diminishing, as is the life of her oil reserves.

Kuwait and Qatar have chosen industrialisation as a principle method of diversification, relying on the cheap power which natural gas can provide, and their relatively abundant supply of capital. But with small indigenous populations, large scale industrial enterprises must be constructed and operated by expatriate workers. Their economies are already heavily dependent on expatriate labour. Bahrain, on the other hand, is relatively self-sufficient in labour, and for her, diversification is a broader concept than only "industrialisation", and includes the development of a productive service industry, a commercial centre, and a communications centre. Yet Bahrain has the largest industrial enterprise in the Arabian Gulf, the Aluminium Smelter, which is operated mostly by nationals.

For Kuwait and Qatar to be successful in their aims of industrialisation, it is essential that nationals participate in these ventures. For this to occur, both a consistent employment policy and training strategy are necessary. Bahrain also has a need for trained nationals if her economy is to continue to expand; she does not have the option of expensively importing labour.

In Chapter Six, an assessment is made of the education and training institutions in each country, and amongst other aspects considered is whether or not they are appropriate to the needs of the economy.

Important to our assessment is a knowledge of external factors, particularly the labour market. Our findings on the demand for labour which is generated by the economy, and the characteristics of the labour market will be used in Chapter Six. Before that Chapter, we will first make a numerical assessment of Kuwait's demand for labour, by occupational group, and the supply of the same between 1970 and 1980.

APPENDIX.

TABLE 4.47. ALLOCATIONS TO THE LAND PURCHASE SCHEME
1960/61 TO 1975/76.

<u>Year</u>	<u>Amount (000 K.D.).</u>
1960/61	42,900
1961/62	58,900
1962/63	46,500
1963/64	32,000
1964/65	45,000
1965/66	29,166
1966/67	10,000
1967/68	20,000
1968/69	17,900
1969/70	9,573
1970/71	24,354
1971/72	19,851
1972/73	23,200
1973/74	25,100
1974/75	27,100
1975/76	50,000 (Estimate)

Source: 1960/61 to 1967/68: Planning Board, Kuwait, Statistical Abstracts, 1965 and 1968.
 1968/69 to 1971/72: Planning Board, Kuwait, Statistical Abstract 1973, p.200.
 1972/72 to 1975/76; Central Bank, Kuwait, Annual Report, 1974/75, p.52

TABLE 4.48. DISTRIBUTION OF TOTAL EXPENDITURE BY TYPE,
1960 TO 1973

<u>Year.</u>	<u>Total Amount</u> <u>(000 K.D.)</u>	<u>TYPE OF EXPENDITURE (%)</u>			
		<u>Capital</u>	<u>Current</u>	<u>Ruling Family</u>	<u>Land Purchase</u>
1960	139,258	19.1	48.1	1.9	30.9
1961	161,650	16.2	55.2	2.2	26.4
1962	165,140	16.2	53.7	2.0	28.1
1963	176,337	20.8	55.5	5.6	18.1
1964	182,156	15.3	54.6	5.4	24.7
1965	241,502	8.6	54.6	4.1	32.7
1966	286,461	16.4	47.8	2.7	33.1
1967	323,980	16.3	62.2	2.4	19.1
1968	263,653	13.8	76.8	3.0	6.4
1969	285,602	18.1	75.8	2.8	3.3
1970	304,675	15.7	73.8	2.6	7.9
1971	346,900	14.6	77.3	2.3	5.8
1972	396,700	15.2	76.7	2.3	5.8
1973	536,700	13.6	80.3	1.4	4.7
1974 ¹	865,200	12.3	83.7	0.9	3.1
1975 ¹	908,600	27.4	66.3	0.8	5.5

Note (1): 1975 (estimate).

Source: 1960-1970: Kuwari, op.cit., p.310.
 1971-1975: Central Bank, Annual Report, 1974/75, Table 17, p.52.

TABLE 4.49. ESTIMATES OF KUWAITI GOVERNMENT EXPENSES AND REVENUE, 1964/65 TO 1975/76, (K.D. Mn).

Year	(1) <u>Public</u> <u>Expenditure</u>	(2) <u>Revenue</u>	(3) <u>Surplus (+)</u> <u>Deficit (-)</u>	(1) (2)
1964/65	182.2	222.2	+ 40.3	82%
1965/66	241.5	244.8	+ 3.3	99%
1966/67	286.5	251.2	- 35.3	114%
1967/68	324.0	312.8	- 11.2	103%
1968/69	263.7	268.3	+ 4.6	98%
1969/70	285.5	306.5	+ 21.0	93%
1970/71	319.3	382.2	+ 62.9	83%
1971/72	346.9	533.6	+ 186.7	65%
1972/73	409.3	629.2	+ 219.9	65%
1973/74	536.3	715.3	+ 179.0	75%
1974/75	936.7	2749.9	+1813.2	34%
1975/76 ⁽¹⁾	898.5	2255.0	+1356.5	40%

Note (1): Estimate of Central Bank.

Source: 1964/65 to 1969/70: Ministry of Oil and Finance, General Budget Report to Parliament, 1971/72, Actual Revenues and Expenditures of Government Ministries and Establishments for 1960/61 to 1969/70, p.47 (Arabic).
1970/71 to 1975/76: Central Bank, Annual Report 1974/75, Table 17, p.52.

TABLE 4.50. ESTIMATE OF GROSS DOMESTIC PRODUCT BY ECONOMIC SECTOR, (K.D. Mn).

1968/69 TO 1971/72:

Economic Sector	1967/68 Value	1967/68 %	1968/69 Value	1968/69 %	1969/70 Value	1969/70 %	1970/71 Value	1970/71 %	1971/72: Value	1971/72: %
Agriculture, Forestry, hunting & fishing	5	0.6	5	0.5	5	0.5	4	0.4	4	0.3
Crude petroleum & natural gas & other mining & quarrying	474	54.6	530	56.0	557	56.6	660	60.0	902	64.5
Manufacturing	34	3.9	37	3.9	36	3.7	42	3.8	41	2.9
Construction	43	5.0	42	4.4	39	4.0	34	3.1	38	2.7
Electricity	28	3.2	31	3.3	36	3.7	40	3.6	47	3.4
Transport, Storage & Communications	30	3.5	33	3.5	35	3.6	39	3.6	41	2.9
Wholesale & Retail Trade	80	9.2	84	8.9	85	8.6	83	7.6	86	6.2
Banking, Insurance & other financial services	15	1.7	17	1.8	18	1.8	19	1.7	21	1.5
Ownership of dwellings	45	5.2	47	5.0	44	4.5	46	4.2	48	3.4
Public administration & defence:	50	5.8	52	5.5	55	5.6	56	5.1	76	5.4
Services:	64	7.4	69	7.3	73	7.4	77	7.0	95	6.8
GDP at factor cost	868	100.0	947	100.0	983	100.0	1100	100.0	1399	100.0

Source: Central Bank, Annual Report, 1972, Table 14, p.45.

TABLE 4.51. SELECTED DETAILS OF INDUSTRIAL MIXED SECTOR COMPANIES

<u>Company</u>	<u>Date Etab.</u>	<u>Book Value of Assets, 1972⁽¹⁾</u>	<u>Employment⁽²⁾</u>		
			<u>Kuwaiti</u>	<u>Non-Kuwaiti</u>	<u>Total</u>
Kuwait National Petroleum Co.	1960	39.0	1,834	5,571	7,585
Kuwait Petroleum Co.	1963	25.0			
National Industries Co.	1960	2.0	7	45	52
Kuwait Chemical Fertilizer Co.	1964	5.0	55	1,009	1,064
Kuwait Asbestos Co.	1960	0.6	-	229	229
Prefabricated Housing Co.	1964	0.7	10	125	135
Kuwait Cement Co.	1968	1.0	6	456	462
Kuwait Metal Pipes Industries:	1966	0.4	3	167	170
Kuwait Flour Mills Co.	1961	2.0	12	251	263
United Fisheries Co.	1971	14.0	58	1,464	1,522

Notes: (1) Figures in K.D. Million.

(2) Relevant to between 1972 and 1973 in each case.

Source: Middle East Economic Digest, 30/3/74, p.357.
 Planning Board, Kuwait, Statistical Abstract 1973, Tables 180 & 184.
 Central Bank, Annual Report 1973, pp. 26 & 28.
 Strategy and Prospects for Industrial Development in Kuwait, 1974,
 1974, op.cit., p.19.

TABLE 4.52. NON-EXPORT ORIENTATED PROJECTS SEEKING
LICENSING IN 1974.

<u>Industrial Activity</u>	<u>Likely Employment at full capacity.</u>
Sugar refining	122
Gravel and mosaic stones	299
Dry batteries	88
Chemical detergents	100
Galvanised water tubes and joints	60
Tubes and spiral welding	120
Plastic packing, bags	51
Oil and margarine	100
Compressed wood and veneer	100
Cement (Portland)	2,000
Pharmaceuticals	100
Metallic office furniture	200
Tanning and wool treating	50
Dry docks	2,000
Total	5,450

Source: Arab Economist, May 1974, Tables 2 and 3.
Strategy and Prospects of Industrial Development in Kuwait, 1974,
p.30 (Arabic).

TABLE 4.54. NUMBER AND PROPORTION OF POPULATION AGED
15-44 ECONOMICALLY ACTIVE IN 1970.

<u>Kuwaiti</u>	<u>%</u>	<u>Number</u>	<u>Non-Kuwaiti</u>	<u>%</u>	<u>Number</u>
Men	68.3	59,597	Men	94.1	161,584
Women	2.4	2,022	Women	17.7	14,429

Source: Estimated from Census 1971, Kuwait, Tables 1 and 9 (Arabic).

TABLE 4.53. INVESTMENT, OUTPUT AND EMPLOYMENT ESTIMATES FOR
EXPORT ORIENTATED PRODUCTS.

<u>Industrial Activity.</u>	<u>Investment Estimate</u> <u>(K.D. m.)</u>	<u>Volume of Production</u>	<u>Total Employment</u>
1) <u>Directly Oil Related</u>			
Primary Oil Lubricants	5	60,000 tons/annum	200
Liquified Petroleum Gas	100	4.5 m. tons/annum	200
Primary and Intermediate Petrochemicals	100	-	100
Melamine	4	10,000 tons/annum	250
2) <u>Indirectly Related to Petrochemicals</u>			
Aluminium Smelters	35	120,000 tons/annum	2,800
Steel Plant	35	300,000 tons/annum	1,200
Fertilisers (Nitric)	6	5,000 tons/annum	300
Total	285		5,050

Note(1); Some of these employment figures are actual, others are personal estimates made from other similar Tendering Proposals, comparison with typical workforces in similar plants, and in the case of the fertilizer plant, typical labour/output ratios.

Source: Industrial Development for Arab States, The Strategy and Prospects of Industrial Development in Kuwait, 3rd Conference on Industrial Development for Arab States, Libya, 7-14 April, 1974, Table 24, p.31 (Arabic).

TABLE 4.55. EDUCATIONAL ATTAINMENT OF ACTIVE KUWAITI WOMEN IN 1965 AND 1970.

	<u>Literate.</u>	<u>Literate.</u>	<u>Primary Cert.</u>	<u>Inter. Cert.</u>	<u>Sec. Cert.</u>	<u>Post- Secondary.</u>	<u>University.</u>	<u>Total</u>
1965 Number	450	182	81	108	127	36	19	1003
%.	44.9	18.1	8.0	10.8	12.7	3.6	1.9	
					29.0			
1970 Number	473	134	186	286	694	29	220	2022
%	23.3	6.6	9.1	14.1	34.3	1.4	10.8	
					60.6			

Source: 1965, Census 1965, Planning Board, Kuwait.
1970, Census 1970, Planning Board, Kuwait, Table 7, p.16.

TABLE 4. 56. EMPLOYMENT BY ECONOMIC SECTOR, 1957, 1965 AND 1970.

Sector:	1957	% Share	1965:	% Share	1970	% Share:
Agriculture & Fishing	1,049)	1.2)	1,983	1.1)	4,060	1.7)
Mining & Quarrying	5,405	6.3)	6,992	3.9)	7,171	3.1)
						4.8
Manufacturing ¹	6,611	7.7)	17,942	10.0)	32,091	13.7)
Construction	8,403	9.9)	28,848	16.1)	33,672	14.4)
						28.1
Electricity, Water, & Gas:	-	-)	6,991	3.9)	7,252	3.1)
Wholesale & Retail Trade	8,224	9.6)	23,045	12.9)	33,013	14.1)
Transport, Storage & Communications	3,566	4.2)	10,025	5.6)	12,138	5.2)
Community, Social & Personal Services	43,900	51.3)	82,534	46.0)	104,136	44.4)
Active Persons	8,397	9.8)	924	0.5)	827	0.3)
N.A.D.						
Total	85,555	100.0	179,284	100.0	234,360	100.0

Note (1): In 1957, "Manufacturing" included "Electricity, Gas & Water".

Source: 1957 & 1965; Statistical Abstract 1973, Table 25, p.52.
1970, Census 1970, Table 14, p.39 (Arabic).

TABLE 4.57. ORIGIN OF G.D.P. BY ECONOMIC ACTIVITY, 1970.

<u>Economic Activity</u>	<u>Contribution to G.D.P. (K.D. Mn).</u>	<u>%</u>
Agriculture and fishing	5	0.5
Crude Petroleum, Natural Gas and other Mining and Quarrying	557	56.6
Manufacturing	36	3.7
Construction	39	4.0
Electricity, Gas, Water and Sanitary Services	36	3.7
Wholesale and Retail Trade	85	8.6
Transport, Storage and Communications Services	35 190	3.6 19.3
Total	983	100.0

Source: Central Bank, Annual Report 1972, Table 8, p.32.

TABLE 4.58. EMPLOYMENT BY ECONOMIC ACTIVITY & NATIONALITY, 1970.

<u>Sector</u>	<u>Kuwaiti</u>	<u>%</u>	<u>Non- Kuwaiti</u>	<u>%</u>	<u>Total</u>	<u>% Share of Total Employment.</u>	
						<u>Kuwaiti</u>	<u>Non-Kuwaiti</u>
Agriculture & Fishing	802	1.3	3,258	1.9	4,060	19.8	80.2
Mining & Quarrying	1,675	2.8	5,496	3.1	7,171	23.4	76.6
Manufacturing	6,109	10.2	25,982	14.8	32,091	19.0	81.0
Construction	2,188	3.7	31,484	18.0	33,672	6.5	93.5
Electricity, Gas & Water	2,133	3.6	5,119	2.9	7,252	29.4	70.6
Wholesale & Retail Trade	7,298	12.2	25,715	14.7	33,013	22.1	77.9
Transport, Storage & Communications	2,362	4.0	9,776	5.6	12,138	19.5	80.5
Community & Social Services	36,826	61.8	67,310	38.5	104,136	35.4	64.6
Active Persons							
N.A.D.	247	0.4	580	0.3	827	29.4	70.6
Total	59,640	100.0	174,720	100.0	234,360	24.4	74.6

Source: Census 1970, Table 14, p.39 (Arabic).

TABLE E.59. EMPLOYMENT BY OCCUPATION, OCCUPATIONAL GROUP & NATIONALITY IN 1970.

	Total Number	Kuwaitis No.	%	Non-Kuwaitis No.	%
Professional and Technical Occupations usually requiring a Science/Maths based University Degree (A-1)					
Physical Scientists and related technicians	340	53	15.5	287	84.5
Architects, Engineers and related technicians	2692	167	6.2	2525	93.8
Life Science and related technicians	31	4	12.9	27	87.1
Medical Doctors, Dentists and Veterinarians	767	47	6.1	720	93.9
Pharmacists and other workers	1683	298	17.7	1385	82.3
Statisticians, Mathematicians, systems analysts and related technicians	53	8	15.0	47	85.0
Economists	94	19	20.2	75	79.8
Accountants	1212	32	2.6	1180	97.4
Jurists	444	124	27.9	320	72.1
Total A-1.	7318	752	10.2	6566	89.8
Professional occupations usually requiring a Liberal Arts University Degree (A-2):					
Clergymen	431	128	29.6	303	70.4
Authors, Journalists and related workers	206	26	12.6	180	87.4
Composing and performing artists	304	131	43.0	173	57.0
Professional, technical and related workers	580	207	35.6	373	64.4
Government administrators	353	318	90.0	35	10.0
Managers	1427	293	20.5	1134	79.5
Government executive officials	2260	1864	82.4	396	17.6
Total, A-2	5561	2967	53.3	2594	46.7
Sub-professional and technical occupations, usually requiring one to three years post-secondary education: (B)					
Surveyors, draughtsmen and technical assistants:	3595	434	12.0	3161	88.0
Aircraft and ships' officers	444	129	29.0	315	71.0
Professional nurses	1872	57	3.0	1815	97.0
Teachers	10394	1766	16.9	8628	83.1
Sculptors, painters and photographers	383	98	25.5	285	74.5
Transport and communications supervisors	444	209	45.5	235	54.5
Production supervisors and general foremen	6051	2166	35.8	3885	64.2
Total B:	23183	4909	21.2	18274	78.8
Skilled Office occupations usually requiring secondary completion (C-1):					
Clerical supervisors	446	107	23.9	339	76.1
Stenographers, typists and card punchers	1388	144	10.3	1244	89.7
Book-keepers, cashiers and related workers	4685	1061	22.6	3624	77.4
Computing machine operators	36	2	5.5	34	94.5
Clerical and related workers, E.C.	15856	6711	42.4	9145	57.6
Managers (wholesale and retail)	152	10	6.5	142	93.5
Sales supervisors and buyers	527	78	14.8	449	85.2
Technical salesmen and commercial travellers	200	2	1.0	198	99.0
Insurance, Real Estate, Auctioneers	730	600	82.1	130	17.9
Managers (Catering and Lodging)	33	-	0.0	33	100.0
Working proprietors (C & L)	442	28	6.3	414	93.7
Total C-1:	32140	11673	36.4	20467	63.6
Skilled Manual occupations, usually requiring pre- vocational and/or training related classroom instruc- tion (C-2):					
Athletes, sportsmen, and related workers	95	6	6.3	89	93.7
Chemical processors and related workers	617	145	23.5	472	76.5
Blacksmiths, toolmakers and machine tool operators	666	68	10.2	598	89.8
Machinery fitters and precision instrument makers	7849	1477	18.8	6372	81.2
Electrical fitters	6713	813	12.1	5900	87.9
Broadcasting operators	76	37	48.8	39	51.3
Telephone and telegraph operators	1150	711	61.6	439	38.1
Blowers, sheet welders, metal erectors	6498	510	7.8	5988	92.2
Glass formers	1748	34	1.9	1714	98.1
Printers	820	317	38.8	503	61.2
Painters	2624	66	2.5	2558	97.5
Bricklayers	18969	860	4.5	18109	95.5
Stationary engine operators	432	86	19.9	346	80.1
Firefighters and policeman & detectives	8178	7839	95.8	339	4.2
Total C-2:	63807	12969	20.3	50838	79.7
Semi-skilled occupations usually requiring only on-the-job training (C-3)					
Transport Conductors	302	64	21.1	238	78.9
Mail distribution clerks	1637	581	35.4	1056	64.6
Salesmen, shop assistants and related workers	11819	2948	24.9	8871	75.1
Housekeeping and related services	118	34	28.8	84	71.2
Cooks and waiters	6989	262	3.7	6727	96.3
Hairdressers	907	10	1.1	897	98.9
Farm Managers and supervisors	61	28	45.9	33	54.1
Farmers	28	15	53.5	13	46.5
Miners and quarrymen	1292	219	16.9	1073	83.1
Metal processors	77	14	18.1	63	81.9
Wood preparers	6	1	16.6	5	83.4
Spinners and weavers	5	1	20.0	4	80.0
Food and beverage processors	2673	123	4.6	2550	95.4
Tailors	3185	84	2.6	3101	97.4
Shoemakers	145	10	6.8	135	93.2
Cabinet makers	2007	138	6.8	1869	93.2
Stonecutters	185	1	0.5	184	99.5
Jewelry workers	300	21	7.0	279	93.0
Rubber and plastic workers	494	14	2.8	480	97.2
Paper product workers	24	1	4.1	23	95.9
Material handling operators	741	150	20.2	591	79.8
Transport operators	17050	4191	24.5	12859	75.5
Production workers W.E.C.	6	1	16.6	5	83.4
Total C-3:	50771	8911	17.6	41860	82.4
Unskilled occupations usually requiring no special education or training: (D):					
Maids and related workers	11252	678	6.0	10574	94.0
Building caretakers	19293	6035	31.2	13258	68.8
Laundresses	1245	19	1.5	1226	98.5
Firefighters, policemen and detectives	8178	7839	95.8	339	4.2
Service workers W.E.C.	1102	472	42.8	630	57.2
Agricultural and horticultural workers	3423	716	20.9	2707	79.1
Fishermen and hunters	441	74	16.8	367	83.2
Labourers W.E.C.	15713	1797	11.4	13916	88.6
Workers not classified by occupation	2410	1821	75.5	589	24.5
Total D:	60447	19401	32.1	41046	67.9
Grand total	237755	61653	26.0	176102	74.0

Source: 1970 Census, Kuwait, Table 21, pp. 197-214 (Arabic).

TABLE 4. 60 EDUCATIONAL ATTAINMENT OF WORK-FORCE BY NATIONALITY AND SEX, 1970.

<u>Nationality</u>	<u>Illiterate</u>	<u>Literate</u>	<u>Primary Cert.</u>	<u>Intermediate Cert.</u>	<u>Secondary Cert.</u>	<u>Post-Secondary Training</u>	<u>University</u>	<u>Total</u>
Kuwaiti	Total	26,938	19,529	6,405	4,176	3,241	182	61,619
	%	43.7	31.6	10.4	6.8	5.3	0.3	
	Men	26,465	19,395	6,219	3,890	2,547	153	59,597
	%	44.3	32.5	10.4	6.5	4.2	0.6	
Women		473	134	186	286	694	29	2,022
	%	23.3	6.6	9.1	14.1	34.3	1.4	
Non-Kuwaiti	Total	63,744	54,462	13,097	10,532	20,942	1,262	176,013
	%	36.3	30.9	7.4	6.0	11.9	0.7	
	Men	59,046	52,733	12,712	9,738	16,593	879	161,584
	%	36.5	32.7	7.9	6.0	10.3	0.5	
Women:		4,698	1,729	385	794	4,349	383	14,429
	%	32.4	11.9	2.6	5.4	30.0	2.6	
Source: <u>Census 1970, Kuwait, Table 16, p.47 (Arabic).</u>								

TABLE 4.61. DISTRIBUTION OF EDUCATIONAL ATTAINMENT OF EMPLOYED PERSONS BY OCCUPATIONAL GROUP AND NATIONALITY, 1970.

Occupational Group.	Nationality	Illiterate	Only Literate	Primary		Intermediate		Secondary		Post-Secondary		University Degree
				Cert.	Cert.	Cert.	Cert.	Cert.	Cert.	Cert.	Cert.	
A-1: Professional and Scientific occupations, usually requiring a science/ maths based University degree:	Kuwaiti	-	2.4	15.7	23.0	30.9	0.8	47.2				
	Non-Kuwaiti	-	0.3	3.1	6.7	11.3	1.0	77.6				
A-2: Professional occupations usually requiring an Arts based University degree:	Kuwaiti	1.2	9.0	10.9	25.3	29.9	3.2	20.5				
	Non-Kuwaiti	-	10.6	2.9	4.2	36.9	2.6	42.7				
B: Sub-professional and technical occupations, usually requiring one to three years post-secondary education:	Kuwaiti	24.5	20.9	5.1	7.3	34.2	2.3	5.7				
	Non-Kuwaiti	4.1	10.0	4.2	8.2	44.0	5.1	24.4				
C-1: Skilled office occupations usually requiring secondary completion:	Kuwaiti	10.7	46.6	17.3	17.9	6.3	0.2	1.0				
	Non-Kuwaiti	5.7	27.4	7.8	13.3	38.8	0.7	6.1				
C-2: Skilled manual occupations usually requiring vocational and/or training related classroom instruction	Kuwaiti	43.6	36.0	15.1	4.9	0.4	-	-				
	Non-Kuwaiti	43.4	37.2	9.9	5.9	3.5	-	0.1				
C-3: Semi-skilled manual occupations usually requiring literacy plus on-the-job training:	Kuwaitis	67.4	24.8	6.3	1.3	0.2	-	-				
	Non-Kuwaitis	34.8	45.6	10.6	5.9	3.0	-	0.1				
D: Unskilled manual occupations not requiring special education or training:	Kuwaitis	65.4	26.8	6.4	1.3	0.1	-	-				
	Non-Kuwaitis	65.5	28.0	4.0	1.6	0.8	-	0.1				

Source: 1970 Census, Kuwait, Table 23, p.196.

TABLE 4.62. DISTRIBUTION OF EDUCATIONAL ATTAINMENT AND NUMBER OF SKILLED AND SEMI-SKILLED WORKERS BY NATIONALITY, 1970.

Occupational Groups	Nationality	Illiterate	Literate	Primary Cert.	Intermed- Cert.	Secondary Cert.	Post- Secondary Cert.	Univer- sity	Total
C-2: Skilled manual occupations, usually requiring vocational and/or training related classroom instruction:	Kuwaitis:	No: 11,671	6,861	2,518	751	72	3	2	21,878
	%:	53.3	31.5	11.5	3.4	0.3	-	-	100.0
C-3: Semi-skilled manual occupations requiring literacy plus on-the-job training:	Non-Kuwaitis:	No: 33,049	34,793	8,651	4,928	2,726	45	92	84,284
	%:	39.2	41.2	10.4	5.9	3.2	-	0.1	100.0

Source: 1970 Census, Kuwait, Table 23, p.196.

TABLE 4.63. EDUCATIONAL QUALIFICATIONS OF GOVERNMENT WORKERS
BY NATIONALITY, 1972.

<u>Educational Attainment</u>	<u>Kuwaitis</u>	<u>%</u>	<u>Non-Kuwaitis</u>	<u>%</u>	
Illiterate	10,844	31.4	17,204	31.1	
Literate	11,759	34.0	15,008	27.1	
Primary	2,777	8.0	2,460	4.4	
Intermediate	3,495	10.0	3,610	6.5	
Secondary	3,615	10.4)	8,124	14.7)	
Post-secondary training	507	1.4)	1,012	1.8)	30.9
University	1,499	4.3)	7,157	13.0)	
Post-Graduate training	92	0.3)	774	1.4)	
Total	34,588	100.0	55,349	100.0	

Source: Planning Board, Kuwait, Statistical Abstract 1974, Table 4.1, p.72.

TABLE 4.64. GOVERNMENT EMPLOYMENT BY GRADE & NATIONALITY, 1972.

	<u>Kuwaiti</u>	<u>Non-Kuwaiti</u>	<u>Total</u>	<u>Non-Kuwaiti share</u> <u>of total</u>
Range I	123	152	275	44.7
Range II	2,533	2,139	4,672	54.2
Range III	16,106	15,204	31,310	51.4
Range IV	11,321	8,985	20,306	55.7
<hr/>				
Range IV				
Contracts	3	2,113	2,116	0.1
Fixed Salaries	40	6,859	6,899	0.6
Permanent Labourers	4,459	1	4,460	99.9
Casual Labourers	3	19,896	19,899	-
<hr/>				
Total	4,505	28,869	33,374	13.5
Grand Total	34,588	55,349	89,937	38.5

'-' indicates less than 0.1.

Source: Planning Board, Kuwait, Statistical Abstract 1974, Table 42, p.73.

TABLE 4.65. PARTICIPATION RATE¹ BY SEX AND NATIONALITY.
1959, 1965 AND 1971.

<u>Bahraini</u>	<u>1957</u>	<u>1965</u>	<u>1971</u>
Men	101	90.4	86.0
Women	3.5	3.0	4.5
<u>Non-Bahraini</u>			
Men	103	101	101
Women	9.2	17.3	21.1

Note (1): Participation rates are expressed as $\frac{\text{No. of persons employed}}{\text{No. of persons aged 15-60}}$

Source: Compiled from information in: Finance Department, Statistical Bureau, The Fourth Population Census of Bahrain, August 1969, Statistical Bureau, Census 1971.

TABLE 4.66. TOTAL EMPLOYMENT BY ECONOMIC SECTOR, 1959, 1965 AND 1971.

<u>Economic Sector</u>	<u>1959</u>	<u>1965</u>	<u>1971</u>
Agriculture & Fishing	4,464	4,654	3,990
Mining and Quarrying	470	177	85
Manufacturing	1,024	401	4,069
Petroleum, Refining and Extraction	8,911	6,940	4,310
Construction	4,739	8,328	10,404
Wholesale and Retail Trade	4,766	7,386	6,666
Banking and Insurance	273	354	775
Transport, Storage and Communications	1,631	5,494	7,743
Government Services	6,492	10,394	11,607
Other Services ⁽¹⁾	13,645	9,146	9,835
Not Stated	540	-	106
Total	46,955	53,274	59,590

Note: (1) Includes "Electricity, Gas and Water", and "Restaurants and Hotels".

Source: Compiled from information in: Finance Department, Statistical Bureau, The Fourth Population Census of Bahrain, August 1969; Statistical Bureau, Census 1971.

TABLE 4.67. EMPLOYMENT BY ECONOMIC SECTOR AND NATIONALITY, 1971.

<u>Sector</u>	<u>Total</u>	<u>Bahrainis</u>	<u>%</u>	<u>Non-Bahrainis</u>	<u>%</u>
Agriculture and Fishing	3,990	2,995	75.0	995	25.0
Mining & Quarrying	85	81	95.3	4	4.7
Manufacturing	4,069	1,742	42.8	2,327	57.2
Petroleum, Refining and Extraction	4,310	3,791	88.0	519	12.0
Construction	10,404	5,639	54.2	4,765	45.8
Electricity, Gas and Water	1,705	1,480	86.8	225	13.2
Wholesale and Retail Trade	6,666	4,520	67.8	2,146	32.2
Banking and Insurance	775	518	66.8	257	33.2
Restaurants and Hotels	1,040	331	31.8	709	68.2
Transport, Storage and Communications	7,743	5,067	65.4	2,676	34.6
Government Services	11,607	10,447	90.0	160	10.0
Other Services	7,090	705	9.9	6,385	90.1
N.A.D.	106	62	58.5	44	41.5
Total	59,590	37,378	62.7	22,212	37.3

Source: Compiled from: Ministry of Labour and Social Affairs, Manpower Resources of Bahrain, December 1973, p.28.

TABLE 4.71. EDUCATIONAL ATTAINMENT AND CUMULATIVE DISTRIBUTION OF WORK-FORCE
BY OCCUPATIONAL GROUP AND NATIONALITY, 1971.

BAHRAINIS.	A-1.		A-2.		B.		C-1.		C-2.		C-3.		D.	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Third Level completed	75	100.0	158	23.4	312	11.7	128	1.7	30	0.3	7	0.1	5	-
Third Level not completed			9	24.7	23	12.6	21	1.9	5	0.3	1	0.1	-	-
Second Level completed	-		117	42.0	1106	54.1	1117	14.6	331	3.4	116	1.6	47	0.7
Second Level not completed			150	64.3	640	78.1	1610	37.5	1151	14.6	438	7.3	452	7.2
Primary Level completed			87	77.2	179	84.9	1064	51.4	1005	24.0	474	13.5	449	13.7
Primary Level not completed			152	99.7	371	98.8	3718	99.8	8060	99.9	6631	99.9	5984	100.0
Unknown	-		2	100.0	32	100.0	13	100.0	5	100.0	1	100.0	-	-
Total	75		675		2263		7671		10617		7668		6937	

NON-BAHRAINIS:

Third Level completed	336	99.1	535	68.0	660	45.0	341	18.0	220	3.1	37	0.6	6	0.1
Third Level not completed	1	99.4	30	71.8	22	46.6	24	19.3	35	3.6	4	0.7	1	0.1
Second level completed	2	100.0	140	89.6	397	73.7	588	50.3	564	11.6	289	6.0	25	0.6
Second level not completed			45	95.3	98	80.4	266	64.4	424	17.6	363	12.6	63	1.8
1st level completed			9	96.4	16	81.5	92	69.2	215	20.6	334	15.7	77	3.4
1st level not completed			25	99.6	121	89.7	574	99.5	5594	99.8	4466	99.8	4936	96.5
Unknown			3	100.0	150	100.0	8	100.0	12	100.0	11	100.0	3	100.0
Total:	339		787		1464		1893		7064		5484		5111	

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Source: Taken from: Socknat, J., op.cit., 1974, Table 8, p.97.

TABLE 4.68. TOTAL EMPLOYMENT OF BAHRAINIS BY ECONOMIC SECTOR,
1959, 1965 AND 1971.

	<u>1959</u>	<u>%</u>	<u>1965</u>	<u>%</u>	<u>1971</u>	<u>%</u>
Agriculture & Fishing:	3,918	12.6	3,562	11.4	2,995	7.9
Mining, Manufacturing & Petroleum	7,098	23.0	5,512	17.6	5,614	14.8
Construction:	2,742	8.9	3,452	11.0	5,639	14.7
Wholesale & Retail Trade	3,360	10.9	4,527	14.5	4,851	12.9
Finance, Insurance & Real Estate:	143	0.5	202	0.6	740	2.0
Transport & Communications:	1,119	3.6	2,928	9.4	5,067	13.3
Social Commitments & Pensions:	12,159	39.3	11,048	35.5	12,410	32.7
N.S.	371	1.2	-		634	1.7
Total	30,910	100.0	31,231	100.0	37,950	100.0

Source: Compiled from information in: Finance Department, Statistical Bureau, The Fourth Population Census of Bahrain, August, 1969; Statistical Bureau, Census 1971.

TABLE 4.69. TOTAL EMPLOYMENT OF NON-BAHRAINIS BY ECONOMIC SECTOR,
1959, 1965 AND 1971.

	<u>1959</u>	<u>%</u>	<u>1965</u>	<u>%</u>	<u>1971</u>	<u>%</u>
Agriculture & Fishing:	546	3.4	1,092	4.9	995	4.4
Mining, Manufacturing & Petroleum	3,307	20.6	2,006	9.1	2,850	12.7
Construction	1,997	12.4	4,876	22.1	4,765	21.3
Wholesale & Retail Trade	1,406	8.8	2,859	13.1	2,855	12.8
Finance, Insurance & Real Estate	130	0.8	152	0.7	344	1.5
Transport & Communications	512	3.2	2,566	11.6	2,676	12.1
Community & Social Services	7,978	49.7	8,492	38.5	7,683	34.4
N.S.	169	1.1	-		183	0.8
Total.	16,045	100.0	22,043	100.0	22,351	100.0

Source: Compiled from information in: Finance Department, Statistical Bureau, The Fourth Population Census of Bahrain, August 1969; Statistical Bureau, Census 1971.

TABLE 4.70. CUMULATIVE DISTRIBUTION OF EDUCATIONAL ATTAINMENT
OF WORK-FORCE BY NATIONALITY AND SEX, 1971.

	<u>Bahrainis</u>				<u>Non-Bahrainis</u>			
	<u>Men</u>	<u>%</u>	<u>Women</u>	<u>%</u>	<u>Men</u>	<u>%</u>	<u>Women</u>	<u>%</u>
Total	36,102		1,848		20,950		1,401	
Unknown	32	100.0	21	100.0	50	100.0	137	100.0
Primary	24,828	99.9	633	97.3	15,519	99.8	337	90.2
Not Completed	(69.0)		(35.0)		(74.0)		(34.0)	
Primary Completed	3,414	31.1	108	63.0	698	25.9	56	66.2
Secondary not completed	4,749	21.7	303	57.1	1,149	22.3	129	62.2
Secondary completed	2,424	8.5	598	40.7	1,686	16.9	336	53.0
Tertiary not completed	49	1.8	10	8.4	104	8.8	13	29.0
Tertiary completed	606	1.7	145	7.85	1,744	8.3	393	28.0

Source: Statistical Bureau, Bahrain, Census 1971, Form No.24.

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1. Details of Kuwait's early oil discoveries and her subsequent expansion of oil exports are found in: Ministry of Finance and Oil, The Oil of Kuwait, Facts and Figures, Kuwait, 1970.
2. In: Al-Kuwari, Oil Revenues of the Arabian Gulf Emirates : Pattern of Allocation and Impact on Economic Development, Ph.D. thesis presented to Durham University, 1974, details of oil production and revenues from 1946 to 1970 are discussed in detail.
3. For a general background to economic life in the early part of the twentieth century see: Freeth, Z., Kuwait was my home, London, 1956. Dickson, H.R.P., Kuwait and her neighbours, London, 1956. For a more contemporary analysis, see Hill, A., Aspects of Urban Development in Kuwait, Ph.D. thesis, Durham University, 1972. See, for an economic analysis, written in 1963, International Bank for Reconstruction and Development, The Economic Development of Kuwait, John Hopkins, 1965. See also: Mallakh, Ragaei, Economic Development and Regional Cooperation : Kuwait, Center for Middle Eastern Studies, Number 3, Chicago, 1968.
4. Al-Kuwari, 1974, op.cit., p.9. provides an account of pearling activities in Kuwait.
5. Central Bank, Annual Report, 1974/75, Kuwait, p.41. See Also Chandler, G., Oil Prices and Profits, Foundation for Business Responsibilities, Discussion Paper Number Thirteen, London, 1975, p.12. for the exact development of oil prices, 1970 to 1974.
6. Union des Banques S isse, Annual Report, 1975/76, Geneva, 1976.
7. Middle East Economic Digest, 27/12/74, p.1608.
8. Quoted in Guardian Supplement on Kuwait, February 1976, p.16.
9. Central Bank, 1974/75, op.cit., p.50.
10. Calculated from information found in Central Bank, 1974/75, op.cit., Table 17, p.52.
11. Information on Table 61 of Central Bank, Annual Report 1974/75, shows that "Wages and Salaries" accounted for between 31% and 49% of all Public Expenditure between 1970/71 and 1975/76. These limits are slightly deflated, as some "wages and salaries" are accounted under other headings.

12. The discussion of government revenue and expenditure in the period 1950 to 1970 relies very heavily on an unpublished Ph.D. thesis: Al-Kuwari, op.cit., 1974 (see footnote 2). This exceptionally complicated topic is dealt with by Al-Kuwari in his Chapter 5, and here we present only some of his results. Further discussion of the structure of government budgets is found in Central Bank, Economic Report, 1975, "Public Expenditure", Kuwait, 1975.

13. Calculated from Central Bank, Annual Report, 1974/75, Table 18, p.54.

14. Mallekh, R., op.cit., "Capital surplus is evidenced in three areas: (1) the gap between government revenues and expenditures, (2) in a comparison between the total savings and the total amount invested in Kuwait, and (3) in the balance of payments", p.76. The author would appear to be correct in (2) and (3), but inaccurate in respect of (1).

15. Law No. 14/74 allocated K.D. 100 Mn. to offset the rise in the cost of living, of which K.D. 60 Mn. was used for wages and salaries and K.D. 40 Mn. to subsidies on essential food items.

16. The cause of this brief checking in the pace of development in the construction sector is generally attributed to the cut in domestic spending by the government which resulted from payments to States involved in the 1967 "June War". It is thought that other factors were involved, including the fact that a certain amount of excess of supply of houses over demand may have occurred.

17. The first attempt to estimate National Income was made by the I.B.R.D. in 1963 for 1959 and 1962/63, and recorded in: op.cit., 1965, Appendix I, pp. 164-168. Sivadubramonian, S., and Ali, Abdullah, National Income Accounts of Kuwait, 1965/66 to 1967/68, Research Monograph No.1, Kuwait Institute of Economic and Social Planning in the Middle East, 1969, made a second estimate of the same in 1968, using the United Nations method described in, United Nations, A System of National Accounts and Supporting Tables, Series, F, No.2, Rev.2, New York, n.d. The division between industry is defined in United Nations, op.cit., and "Gross domestic product at factor cost ... is equal to the sum of employee compensations, profits before direct taxation and provisions for capital consumption interest and rent originating in the industry", p.20. It is never made clear in Kuwaiti publications which approach to measuring value added is used. It is thought likely that this United Nations convention is used. Gross domestic product in the government sector would be mainly a measurement of "the sum of employer compensation". In view of the nature of government employment in Kuwait there may be grounds for scepticism over the value of this measure of National Income.

18. Planning Board, Kuwait, Five Year Plan 1967/68 to 1971/72, Introduction.

19. Reference for setting up of Ind. Bank as suggested I.B.R.D. See: International Bank for Reconstruction and Development, The Promotion of Manufacturing in Kuwait, 1971, Chapter IV, p.28.
20. Calculated from Planning Board, Kuwait, Statistical Abstract, 1964 Tables 56 and 59. pp. 67-70.
21. The "mixed sector" is to be distinguished from the "Oil Sector" (before 1974). "Government" and private sector companies. Mixed Sector companies tend to be relatively large scale, and have their equity capital divided between private shareholders and the government, usually in a 40/60 ratio.
22. Planning Board, Industrial Production Census for 1966, Published by Ministry of Commerce and Industry, June 1971.
23. The figures for Gross Fixed Capital Formation and National Income are taken from Planning Board, Statistical Abstract, 1974, Table 90, p.139.
24. See: Middle East Economic Digest, 18 July 1975, "Kuwait".
25. Interview with Ali Khalifah al-Sabah reported in Middle East Economic Survey, Vol.20, No.4, Nov. 1976, pp. 1-2.
26. (1) The Credit Bank, set up in 1961, converted in 1965 to the Savings and Credit Bank has not initiated or financed large scale industrial activity, even though at its creation it was designed to do so. Its lending has been largely orientated to the construction sector, and small scale private businesses.
27. Central Bank, Annual Report 1975/76, Table 17, p.52. Figures relating to Budget Accounts and the State Reserve shown here and in the following paragraphs are taken from: Central Bank, Annual Report, 1975/76, Table 17, p.52.
28. See Table 4.56 for the division of sectors in "Primary, "Secondary" and "Tertiary".
29. See Chenery, H., "Targets for Development", in The Widening Gap, (eds.) Ward, B., Runnals, J.D., and D'Anjou, L., New York, 1971, pps. 27-29, for a discussion of this point. Andari, S., in Kuwait : Developing a Mini Economy, M.A. thesis, Durham University, 1975, Chapter 2, p.6. discusses this distinction with reference to Kuwait. "Wagner's Law"., (see Pryor, F.L., Public Expenditure in Communist and Capitalist Nations, Allen and Unwin, 1968, pp.59-63) argues that in a growing economy the share of public consumption expenditures is in the national income increases. In Kuwait from 1974 onwards, Kuwait's "ratio-income-elasticity" was actually negative (~ .28), For every 1% increase in income per capita, the the proportion of government spending of all income fell by

- 0.28%. It should be said that the crude assumption is made that the government income can be taken as a proxy for Gross National Product. For examples of other countries where Wagner's Law does not hold, see Pryor, op.cit., p.63.
30. This occupational division has its origins in the initial division which Parnes used for the Mediterranean Regional Project, and which is defined in Parnes, H.S., Forecasting Educational Needs for Economic and Social Development, O.E.C.D., Paris, 1962. The occupational divisions used here are found in Department of Statistics, Classification of Occupations, Jordan, 1970.
 31. International Labour Office, International Standard Classification of Occupations, Revised Edition, 1968, Geneva, 1968. See "Introduction", p.1. for an explanation of this classification.
 32. See Middle East Economic Digest, 12/11/76, "Kuwait". "The loss of employees from the public sector to the private sector has prompted the Finance Ministry to prepare a detailed report on its causes and possible solutions".
 33. Stanford Research Institute, Survey of Social Attitudes, 1974.
 34. All figures relevant to 1970/71, except for Qatar's oil income, which was taken for 1972/73.
 35. Belgrave, J.H.D., Welcome to Bahrain, The Auguston Press, Bahrain, 7th Edition, 1970, p.41.
 36. In Rumaihi, M., Social Development and Political Change in Bahrain Since the First World War, unpublished Ph.D. thesis, Durham University, 1974., the author provides a comprehensive account of early economic activities on the island, including pearling. The figures quoted here are taken from Al-Kuwari, 1974, op.cit., p.9. who cites Lorimer, J.G., Gazetteer of the Persian Gulf, Historical Section, Vol, VI, pps. 3112-3120, 1908.
 37. This point is mentioned by both Rumaihi, M., 1974, op.cit., and by Hill, A., Aspects of Urban Development in Kuwait, unpublished, Ph.D. Thesis, 1971, Durham University.
 38. Belgrave, C., Personal Column, Hutchinson, London, 1960, p.83.
 39. These figures are taken from Bahrain Petroleum Company, Annual Reports, 1938/39 and 1973/74.
 40. Bahrain Petroleum Company, Annual Report, 1973/74.

41. Al-Kuwari, 1974, op.cit., p.296.
42. Ministry of Finance, Statistical Bureau, Statistical Abstract 1974, Table 29, p.35.
43. Al-Kuwari, 1974, op.cit., Appendix 3.1., p.297.
44. Ibid.
45. Ibid.
46. Financial Times, Supplement on Bahrain, 10/10/76, "Reserves are now reliably estimated between 8,000 and 11,000 Bn. cubic feet". p.19.
47. Al-Kuwari, 1974, op.cit., p.119.
48. United Nations Inter-Disciplinary Reconnaissance Mission, Bahrain, 1972, U.N.E.S.O.B., Annex A. 'Extracts from "The Story of Alba"', p.51.
49. The Financial Times, Supplement on Bahrain, 'Aluminium', 2/10/76, p.19.
50. Ibid.
51. Ibid.
52. Belgrave, C., 1960, op.cit., records that "at the beginning of 1941 the first Census ever held in Bahrain was successfully carried out", p.117.
53. United Nations Inter-Disciplinary Reconnaissance Mission, Bahrain, 1972, stated that "It is estimated that the existing underground water supplies will become saline in less than thirty years a large part of (the) agricultural land is already neglected because of low profits and the migration of labour to the oil industry", p.26.
54. See Part I, "Employment and the Labour Market", in this Chapter.
55. See: Financial Times, Supplement on Bahrain, 'The Economy', 10/2/76, p.16.
56. Ministry of Information, Government of Qatar, Qatar into the Seventies, May 1973, p.50.
57. Ibid., p.51.

58. Cited by Al-Kuwari, 1974, op.cit., p.9, quoted from Lorrimer, J.G., op.cit., Vol.VI., pp. 3112-3120.
59. Al-Kuwari, 1974, op.cit., p.149.
60. Al-Kuwari, 1974, op.cit., Table 6.1., p.150.
61. See The Guardian, Sheikhdome for the Seventies, 2/22/73, p.22.
62. Details of the development of Qatar's oil, including the concessions, volume of output, etc., are given in Qatar into the Seventies, 1973, op.cit., 'Petroleum', p.48.
63. Middle East Annual Review, 1975/76 'Qatar'. "Trends in the Petroleum Industry, p.211.
64. Ibid.
65. See: Middle East Economic Digest, 13/2/76, 'Qatar'.
66. Qatar into the Seventies, 1973, 'Diversification', p.94.
67. Al-Kuwari, 1974, op.cit., p.159, Table 6.7.
68. Figures compiled using Qatar into the Seventies, op.cit., and Financial Times, Supplement on Qatar, 1975.
69. Ibid.
70. Middle East Economic Digest, 'Qatar', 23/1/76.
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72. Ibid.
- 73+ Qatar into the Seventies, 1973, "Agriculture", p.87.
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CHAPTER 5A MANPOWER ASSESSMENT FOR KUWAIT, 1970-1980.Introduction.

This chapter consists of a manpower assessment for Kuwait for the period 1970-1980. Our assessment compares the total demand for labour with the supply of Kuwaiti labour from schools, colleges and universities over the period. From this comparison we are able to assess, to some extent, the appropriateness of the distribution of educational resources in Kuwait, given her aims of economic development.

Our estimate of the demand for labour is made for two situations: (a) economic growth as seems most likely, (b) no economic growth. Our results show that in either situation there is still an excess demand for labour, which presumably non-Kuwaitis will fill. Interestingly, our results show the same relative demand for different skills, with or without economic growth. This suggests that we can assess the current disposition of educational resources by an examination of the current relative demand for labour.

From our results it seems that a re-allocation of Kuwait's educational resources could enhance the contribution of Kuwait's human resources to her economic development.

5.1. Methodology.

In Chapter 2, various methods of appraising the distribution of investment in human resources were discussed. On balance, a "manpower assessment" approach was chosen as one which might usefully be employed in Kuwait. The theoretical basis was discussed in that chapter, but the practical steps involved were not. Although our manpower assessment is primarily a tool to aid the enquiry into Kuwait's investment in human resources, the mechanics of which are of secondary importance to the results of same, it is important to understand some of the particular assumptions made, as these affect the results and therefore their interpretation.

The main steps and assumptions and their possible implications for the results of the exercise are discussed in the text. Details of each step and the Tables involved are included in the Appendix. The manpower assessment divides between the estimation of the demand for labour and the estimation of the supply of labour. It is the former which involves the most questionable assumptions and uses the least reliable data. We will deal with it first.

5.2. The Demand for Labour.

The period over which the demand for and the supply of labour is estimated is 1970 to 1980. The most recent Census took place in April of 1975, but only the Preliminary results have been released. Consequently, we are obliged to use 1970 as the "base year". This is not such a disadvantage as might be thought, as 1970 to 1973 was, in terms of economic growth, mostly a continuation of previous trends. From 1974 onwards the effect of the government's increased revenue, and the decision to industrialise, have been and are likely to continue to be felt.

The employment which economic growth generates could be estimated most easily if Kuwait had a "National Plan", with sectoral investment targets and additional employment estimates. Knowing the employment of each sector in the base year of the plan, future employment could be estimated if an assumption is made concerning productivity. There are at least two reasons why this approach is rejected for Kuwait: No National Plan exists, although one is currently being drawn up; a preliminary investigation of productivity trends between 1965 and 1970 has shown that for some sectors productivity fell over the period. This is not an altogether unknown experience, but it is odd for a country like Kuwait, an importer of the most recent technology. Moreover, it is unreasonable to rely on that, or any other trend, persisting.

A more general criticism is that this approach places a reliance on National Plan estimates, which are seldom fulfilled, and therefore is a procedure of dubious merit.

A less sophisticated approach to estimating additional employment which was discussed in Chapter Two, is to estimate future employment by extrapolating present trends. This approach is used here, though

with a series of refinements. Three sectoral groups have been distinguished: "I - Crude Petroleum, Natural Gas and other Mining and Quarrying" and "Agriculture and Fishing"; "II - Manufacturing" and "Construction"; "III - Wholesale and Retail Trade"; "Transport and Storage" and "Communications", "Electricity, Gas and Water", "Personal and Social Services (including Government)". These three divisions accord approximately to the familiar "Primary, Secondary and Tertiary" distinction. Employment expansion for each was estimated on a different basis, and details of the approach are given in the Appendix. Here we indicate the results of our estimates.

I: "Crude Petroleum, Natural Gas and other Mining and Quarrying" and "Agriculture and Fishing".

The capital intensive nature of the oil industry, and the very small increase in employment 0.5% p.a.) from 1965 to 1970 suggested that there would be very modest increments in total employment from 1970 to 1980.

The agricultural sector in Kuwait is constrained by a hostile climate, poor soil and lack of water. It was estimated that overall employment would increase by about 5% per annum.

II: "Manufacturing and Construction".

The approach used to estimate additional employment in these two sectors differs from that used for the others. Attention is focussed on the additional employment which particular projects generate in the Manufacturing Sector. Employment in the Construction Sector is assumed to be closely linked to investment in the Manufacturing Sector.

Details of industrial projects are found in Ministry of Commerce publications, and estimates of employment were relatively precise. The Industrial Licensing Committee insists on a comprehensive description of any proposed venture, and approved projects receive cheap water and energy, possibly a loan, and occasionally tariff protection.

It was assumed that between 1970 and 1975, employment increased at a similar rate to the period 1965 - 1970. From 1975 onwards additional employment was estimated by using the actual estimates of the planned projects in the Manufacturing Sector.

III: "Wholesale and Retail Trade", "Transport, Storage and Communications", "Electricity, Gas and Water", "Personal and Social Services".

These sectors normally maintain a consistent level of employment, rising with population increase and increased investment in the Manufacturing Sector. Each sector is assumed to increase employment at a rate slightly higher than that experienced between 1965-1970, except for "Wholesale and Retail Trade". This sector experienced a very rapid growth of total employment between 1965 and 1970 of 7.5% p.a. and a slower rate is used for the period 1970-1980.

IV: All Sectors.

In Chapter Two the possibility of using a variety of employment growth rates in order to compare the implications of each was discussed. It was decided to limit the model to two "growth" alternatives. A "most likely" growth of employment model, and a "no growth" model. These two were chosen because it was felt they represented the most useful comparison for the reader. It seemed pointless to construct entirely unrealistic models; Kuwait's economic future is uncertain enough without adding to the confusion. A "no growth" model was entered as that shows the implications of the "rentier state" model, discussed in Chapter Four.

These estimates of employment expansion yield an overall increase of 2.3% p.a. between 1970 and 1975, and one of 4.6% p.a. from 1975 to 1980, somewhat lower than the actual rate of increase between 1965 and 1970 of 5.5% p.a. The economic growth estimated for Kuwait, 1970-1975 is possibly too low. But we have a model in which the sectoral distribution of additional employment is probably close enough to the actual to be usable.

While the overall picture may not reveal a sufficiently large demand for labour, the relative demand for each type of labour is probably more correct. There is also a strong case for tending to a conservative estimate of employment growth.

a) Employment by Sector.

For each sector we have a figure of increase in employment 1970-1975 and 1975-1980. The occupations found in each sector in 1970 were divided into seven occupational groups which have similar education or training requirements. In Chapter 4 the basis and value of this division of all occupations, and its relationship to the original divisions of the International Standard Classification of Occupations were discussed. On the basis of our matrix of Occupational Groups by Economic Sector, the additional employment in each sector was allocated. This step involves the assumption that within each sector, the occupational blend will remain constant from 1970 - 1980. This is a questionable step only for the Manufacturing Sector particularly for the period 1975-1980. Different industries and new occupations will arise in that period, which are assumed by this method to have the same occupational distribution as in all previous manufacturing industry. Inaccuracies that follow from this step are ameliorated by the grouping of jobs with similar education and training backgrounds together. While the new industries may involve different types of jobs, the blend of education and training requirements is likely to be recognisably similar.

b) Death and Retirement.

Between 1970 and 1980 a number of active Kuwaitis will die or retire from the workforce. This in effect creates an additional demand for labour, so should be included in our assessment. For both five year periods, 1970-1975 and 1975-1980, it was assumed that one third of all active Kuwaitis between the ages of 50 and 64 leave the workforce. This covers the likelihood of some Kuwaitis retiring early,

and some remaining active beyond the age of sixty-four. The number of persons dying or retiring was distributed between occupational groups in proportion to their relative share.

While this method is crude, it is consistent with the accuracy of the remainder of the model. In fact, the numbers involved are small, as most active Kuwaitis are less than forty years old.

c) Job Opportunities, 1970-1975; 1975-1980.

Job opportunities arise for Kuwaitis from three sources: the expansion of the economy, which leads to a demand for additional labour; the death and retirement of Kuwaitis; and non-Kuwaitis working in Kuwait (who occupy jobs which the government hopes nationals will eventually fill).

In the conclusion of this chapter, the supply of Kuwaitis to the labour market is matched against the total number of job opportunities. The short-fall is the number of non-Kuwaitis working in Kuwait, a surplus would be the number of Kuwaitis presumably unemployed.

The assumptions we have used when estimating the additional number of job opportunities may give a conservative bias. An annual increase in employment between 1970 and 1980 of 3.5% is probably less than the actual. In order to provide a comparison of our own estimate of employment growth, supply will be measured against the demand for labour with the economic growth anticipated and the demand for labour assuming no economic growth.

5.3. The Supply of Labour.

Kuwait's economy depends on a large number of expatriate workers. If the economy develops and more workers are required, then the supply will come from two sources: non-Kuwaitis migrating to Kuwait; male and female Kuwaiti youths. It is the supply of Kuwaitis which concerns us here.

There are few conceptual difficulties in estimating the Kuwaiti labour supply, only practical ones. The basic principle is simple; in each year of our assessment, a number of Kuwaitis enter the workforce, with a variety of educational and training backgrounds. Some are illiterate, and never entered school. Some are University graduates. All entrants are more than fourteen years old, since it is illegal to work below that age. Every graduate of schools and training institutions, and every non-graduate, are placed in one of seven educational attainment categories. These persons are the "potential" workforce. The "actual" workforce is obtained by subtracting from the potential workforce the proportion that will not participate in the economy. Participation rates suggest that almost all Kuwaiti men work, but only a proportion of Kuwaiti women do so. The details of this step, and the numerical estimation of supply are found in Appendix II.

In the model of student flow it was assumed that at every level pupils either entered stage one, or were considered potential workforce entrants. Once in stage one, they either completed the year and passed on to stage two, dropped out or repeated the year. The entire model of student flow, 1970-1980, was inevitably extremely complicated, and made the more so by the introduction of trend factors into the estimation, where necessary. Working out accession, promotion, repetition and drop-out rates was a laborious but necessary task if the model was to be reasonably accurate. Particular difficulties which were encountered were the inclusion of non-Kuwaitis in educational statistics, inconsistent

and occasionally non-existent data. Rather than take a simpler output method, it was thought worth the extra care to achieve more accuracy.

Table 5.1 shows the results of the exercise. The seven occupational categories range from "University Science Graduates" to "Non-Completion of Primary". The two time periods, 1970-1975 and 1975-1980 are shown. Obviously, 1975-1980 is the period for which projection was necessary, but unlike demand projections, supply ones are made easier by the fact that entrants to the labour force in 1980 must have been born before 1966, hence, by using Census data, educational statistics and publications of particular educational institutes, relatively accurate assessment is possible. Table 5.1. shows the supply of men and women over each period by educational attainment.

TABLE 5.1. POTENTIAL SUPPLY OF KUWAITIS, 1970-1975 AND 1975-1980,
BY SEX AND EDUCATIONAL ATTAINMENT.

	<u>1970-1975</u>			<u>1975-1980.</u>		
	<u>Men</u>	<u>Women</u>	<u>Total</u>	<u>Men</u>	<u>Women</u>	<u>Total</u>
University Science Degree (A-1).	177	-	177	316	-	316
University Arts Degree (A-2)	571	571	1142	738	738	1476
One to Three Years post-secondary education (B).	234	57	291	933	672	1605
Secondary School Completion (C-1)	3410	484	3894	6028	542	6570
Intermediate or Technical Secondary completion, but less than General Secondary Completion (C-2).	3934	-	3934	5948	-	5948
Primary, but less than Intermediate School Completion (C-3)	3849	-	3849	5129	-	5129
Non-completion of Primary (D).	2555	-	2555	3938	-	3938
Total	14,730	1,112	15,842	23,030	1,952	24,982

Source: Tables 5.37 and 5.38.

Table 5.1 reflects a number of assumptions which our model of student flows made. Women represent a small proportion of the total supply of Kuwaiti workers, 7% in 1970-1975 and 8% in 1975-1980. They are a small proportion of all active Kuwaitis, and those who do work tend to be extremely well educated. Moreover, they have in the past tended to concentrate in "acceptable" occupations, particularly teaching, for which the formal education system is capable of training them.

The considerable increase in the supply of persons with "One to three years post-secondary education" between 1970-1975 and 1975-1980 is partly due to the rapid increase in the number of girls entering the Teacher Training Colleges.

Table 5.2 summarises the distribution of "actual" entrants to the workforce by educational attainment. The proportion of entrants with Secondary completion or more rose from 34.7% in 1970-1975 to 39.9% in 1975-1980. Yet the attrition rate of pupils in schools, together with those who do not enter school at all has meant that between 1975 and 1980, 60% of all labour market entrants had less than secondary education, and 16% were presumably illiterate. A point to note here is that it would not necessarily be ideal for Kuwait to have every pupil a University graduate. On the contrary, this would most likely lead to a waste of resources. Given compulsory education to the Intermediate level, and free access to the Secondary level, a large number of pupils must either "drop-out" or choose to leave school upon Intermediate completion, and some never enter school at all.

5.4. Resolution of Demand and Supply.

The resolution of demand for labour by occupational groups, and the supply of Kuwaiti labour by educational attainment does involve a questionable assumption. Namely that persons with particular education or training backgrounds will enter the market for jobs which require similar qualifications. It is thought that while some may not do this, the majority will. The private sector of Kuwait exhibits a consciousness of educational qualifications in its recruitment, as does the mixed sector. While the government has a duty to employ all Kuwaitis, irrespective of educational qualifications, not everyone is hired at the same wage. It is known that, for example, graduates get better paid jobs. Unfortunately, the government also shows an occasional propensity for employing people with no education in "professional" positions. But these aberrations involve only a small number and mainly, it is thought, relatively old Kuwaitis who have achieved promotion with time. Contemporary recruits are unlikely to receive such treatment.

TABLE 5.2. SUMMARY OF DISTRIBUTION OF "ACTUAL" KUWAITI LABOUR MARKET ENTRANTS BY EDUCATIONAL ATTAINMENT, 1970-1975 AND 1975-1980 (CUMULATIVE PERCENTAGES).

<u>Educational Attainment</u>	<u>1970-1975</u>	<u>%</u>	<u>1975-1980</u>	<u>%</u>
University Science Degree	1.1)		1.3)	
University Arts Degree	7.2)		5.9)	
One to three years post-secondary education	1.8)	34.7	6.4)	39.9
Secondary school completion	24.6)		26.3)	
Intermediate or technical secondary completion, but less than Secondary General completion	24.9)		23.8)	
Primary school, but less than Intermediate school completion	24.3)	65.3	20.5)	60.1
Non-completion of Primary	16.1)		15.8)	
Total	100.0		100.0	
Total Number	15,842		24,982	

Source: Table from Table 5.1.

Table 5.3 compiled from Table 5.40 in the Appendix shows total employment, Kuwaitis and non-Kuwaitis, by occupational group in 1970, 1975 and in 1980. The non-Kuwaiti share falls during the period from 74.5% in 1970 to 72.0% in 1980. This establishes an important point, that Kuwait will continue to depend substantially upon non-Kuwaiti labour.

There are no radical changes in the relative shares within occupational groups; the non-Kuwaiti share in "Skilled Office Jobs" does however fall from 59.9% in 1970 to 48.9% in 1980. This is the only occupational group in which, by 1980, Kuwaitis are in a majority.

There is no doubt that Kuwait will continue to depend on expatriate assistance in the economy in the foreseeable future. However there is uncertainty over whether the educational system, the training institutions are providing appropriate courses for Kuwaitis and whether Kuwaitis are training in ways that are most beneficial, given the particular requirements that the economy has for labour.

With only a knowledge of the relative supply of different skills and the relative demand for the same, we cannot answer this question. If we possessed data on the cost of producing each type of labour and the benefit to the community of the same, it might be possible to know what production blend of labour would yield the greatest net social benefit. Cost data are unavailable. It might have been possible to use government wage rates as an indication of shadow prices for each output, but the government wage rates are not thought to be linked to marginal product of labour, as we noted in Chapter 4.

We do have some guide to the government's view of the value of different types of labour. Throughout educational statements over several years, reference is made to an aim of education being (a) the replacement of expatriates; (b) self-sufficiency in technical and scientific jobs. However, not every entrant to the educational system

TABLE 5.3. A SUMMARY OF THE RELATIVE SHARES OF KUWAITIS AND NON-KUWAITIS
IN THE LABOUR FORCE, 1970-1980, ASSUMING ECONOMIC GROWTH.

<u>Occupational Group</u>	<u>1970</u>		<u>1975</u>		<u>1980</u>	
	<u>Kuwaiti</u>	<u>Non-Kuwaiti</u>	<u>Total</u>	<u>Kuwaiti</u>	<u>Non-Kuwaiti</u>	<u>Total</u>
Professional and Scientific occupations usually requiring a Science/Maths based University Degree (A-1):	2114	3764 94.6	3978	321	4066 92.6	4387
Professional Occupations, usually requiring an Arts based University Degree (A-2):	2792	7560 73.0	10352	3744	8296 68.9	12040
Sub-professional occupations and technical occupations, usually requiring one to three years post-secondary education (B):	4647	15897 77.3	20544	4894	18374 78.9	23268
Skilled office occupations, usually requiring secondary completion (C-1):	13560	20268 59.9	33828	16919	21279 55.7	38198
Skilled Manual occupations, usually requiring Vocational and/or Training related classroom instruction (C-2):	11203	28916 72.0	40119	14721	28838 66.2	43559
Semi-skilled manual occupations, usually requiring literacy plus on-the-job training (C-3):	5321	33945 86.4	39266	8583	34372 80.0	42955
Unskilled Manual occupations, not requiring special education or training (D):	24805	64372 74.6	86188	23053	75627 76.6	98680
Total:	59,629	174,720 74.5	234,345	237,331	190,852 72.5	263,087
Source: Compiled from Table 5.40.						329,403

has the requisite intelligence or aptitude to qualify for these jobs. We must therefore adjust our "maximum benefit" condition to one where the largest possible number of graduates enter professional occupations, etc. Table 5.4 suggests that no Kuwaiti is going to be unemployed in the foreseeable future. The Kuwaiti supply of labour never rises to more than 10% of the total demand for their services in any one group of occupations. Common sense would imply that as unskilled workers require no training it would be relatively easy for Kuwaitis to replace non-Kuwaitis in those types of jobs. More valuable to Kuwait's development would be for as many Kuwaitis to enter the labour market qualified to fill professional or technical jobs.

TABLE 5.4. KUWAITI LABOUR MARKET ENTRANTS AND JOB OPPORTUNITIES
BY OCCUPATIONAL GROUP, 1970 - 1980.

<u>Occupational Group</u>	(1) <u>Kuwaiti Labour</u> <u>Market</u> <u>Entrants.</u>	(2) <u>Job Oppor-</u> <u>tunities.</u>	<u>(1)x100</u> <u>(2)</u>
Professional and Scientific Occupations, usually requiring a Science/Maths based University degree (A-1)	493	13,974	3.5
Professional occupations, usually requiring an Arts based University Degree (A-d)	2,618	34,558	7.5
Sub-professional occupations and technical occupations, usually requiring one to three years post-secondary education (B)	1,896	69,295	2.7
Skilled office occupations, usually requiring secondary completion (C-1)	10,464	104,195	10.0
Skilled manual occupations, usually requiring vocational and/or training related classroom instruction (C-2)	9,882	131,919	7.4
Semi-skilled manual occupations, usually requiring literacy plus on-the-job training (C-3)	8,978	132,172	6.7
Unskilled manual occupations, not requiring special education or training (D)	6,493	289,394	2.2
Total	40,824	775,507	5.2

Source: Compiled from Table 5.40.

Table 5.5 shows the distribution between occupational groups of the supply of Kuwaiti labour and the demand for their services, with and without economic growth. Both variants to demand are included in order to show that our estimate of Kuwait's economic growth and the labour that it will require does not change the pattern of demand significantly. Of the 775,000 new job opportunities which occur between 1970 and 1980, economic growth alone accounts for 76.4%. Kuwaitis who die or retire account for a further 1.1% and non-Kuwaitis present in Kuwait in 1970 accounted for a further 22.5% (see Table 5.12 for New Jobs, 5.13 for Kuwaitis dying or retiring, and Table 5.40 for non-Kuwaitis present in 1970 and a summary of all three).

It could be argued that despite the attempts to estimate the demand for labour accurately, this was not done, and instead an assessment of job opportunities between 1970 and 1980 is merely a projection of the additional number of under-employed government workers. While this criticism may be partly true (Social and Personal Services employment was estimated to increase at 3.6% p.a.) the similarity of the two distributions suggests that this is not the case. The "no economic growth" distribution of labour demand is based on the actual excess demand which existed in 1970 met by non-Kuwaitis plus Kuwaitis who die or retire between 1970 and 1980. The similarity of the two distributions suggests that the kind of jobs which non-Kuwaitis filled in 1970 are similar to the kinds of jobs that the economic growth which we have described will require. Hence our projection of extra job opportunities appears to describe an actual need for workers, and is not a projection of still more under-employed government employees. We have estimated that in order to meet its commitments, government employment should expand at about 3.6% per annum. In 1980, it will be possible to discover exactly what it has expanded by, and perhaps the rate of increase will be much higher. But that would be because the government has chosen to use civil service employment as a means of income

TABLE 5.5. RELATIVE SUPPLY OF KUWAITI LABOUR MARKET ENTRANTS,
RELATIVE DISTRIBUTION OF JOB OPPORTUNITIES: (a) WITH ECONOMIC
GROWTH: (b) WITHOUT ECONOMIC GROWTH, BY OCCUPATIONAL GROUP.
1970 - 1980.

<u>Occupational Group.</u>	(1) <u>Distribution of Kuwaiti Labour Market Entrants.</u>	(2) <u>Distribution of Job Oppor- tunities with Economic Growth.</u>	(3). <u>Distribution of Job Oppor- tunities Without Economic Growth.</u>
Professional and Scientific Occupations usually requiring a Science/Maths based University Degree (A-1).	1.2	1.8	2.1
Professional occupations, usually requiring an Arts based University Degree (A-2)	6.4	4.4	4.4
Sub-professional and technical occupations, usually requiring one to three years post-secondary education (B)	4.6	8.9	9.1
Skilled office occupations, usually requiring secondary completion (C-1)	25.6	13.4	11.9
Skilled manual occupations, usually requiring vocational and/or training related classroom instruction (C-2)	24.2	17.0	16.3
Semi-skilled manual occupations, usually requiring literacy plus on-the-job training (C-3)	22.0	17.0	19.3
Unskilled manual occupations, not requiring special education or training (D)	15.9	37.3	36.9
Total	100.0	100.0	100.0

Source: Compiled from Table 5.40.

distribution, and not because of the demands of the economy. To see the true or "shadow demand" for labour, educational planners should not consider the burgeoning ranks of government employment, but rather the distribution of job opportunities that Table 5.5. shows. As the distribution of job opportunities is insensitive to economic growth, Column (3) indicates the blend which educational planners should aim for.

To return to our principal enquiry, does the blend of output of schools and educational institutions accord with the needs of the economy, we have established that in the absence of "cost" or "benefit"

data, we cannot estimate an output distribution which yields a "maximum benefit" to Kuwait on a numerical basis. However we have established that the more persons qualifying for "technical", "scientific" and "professional" jobs, the better. It should be said that while a shortage of Kuwaitis exists at every level, as long as Kuwaitis enter productive employment, there is a net gain to society. However a greater gain is achieved if Kuwaitis enter the more skilled occupations. From Table 5.3 we may observe the following: (1) 6.4% of the Kuwaiti supply of labour is found in "Professional occupations, which usually require an Arts Degree", whilst 4.4% of the job opportunities are found there. (2) 1.2% of the Kuwaiti supply of labour is found in "Professional Occupations which usually require a Science/Maths based University Degree" whilst 1.8% of job opportunities are found there. (3) 4.6% of the Kuwaiti supply of labour is found in "Sub-professional and Technical Occupations which usually require one to three years post-secondary education", while 8.9% of job opportunities are found there. (4) 25.6% of the Kuwaiti supply of labour is found in "Skilled Office Jobs" where 13.4% of all job opportunities exist.

Given Kuwaiti statements of educational objectives we could assume the following policy implications for educational planners:

1. Train more people for Professional Scientific Occupations and fewer for Professional Occupations which usually require an Arts Degree, until the ratio of their output is at least one science graduate to two arts graduates, and not as present with one science graduate to every five arts graduates.
2. Increase the number of Sub-Professionals and Technicians until their number reaches at least four times the number of Science Graduates and twice the number of Arts Graduates. The additional supply of secondary school graduates should be taken from the current output of secondary schools.
3. Secondary school graduates should be encouraged to continue their

studies in order to become either "Sub-Professionals" or "Scientific Professionals", but not Arts Graduates.

These three policy implications concern not only educationalists, but also those people in the government concerned with wages and salaries. Unless it pays Kuwaitis to opt for the most desirable courses socially, there is little likelihood that they will. In the following chapter we continue our discussion of wages and salaries, which as we have already seen, apparently are not set in the most helpful way for Kuwait's economic development.

APPENDIX.

This appendix presents the details of each step of our estimate, and while it is an essential part of the study, readers concerned more with the general argument may wish to pass on to Chapter 6.

5.5. The Demand for Labour.

The method of assessing the demand for labour was outlined in the text of this chapter. Here, the statistical basis of the assessment is presented.

Table 5.6 shows employment by economic sector in 1965 and 1970, with growth rates. The overall increase of employment was 5.5% per annum, and was exceeded by the "Agriculture and Fishing", "Manufacturing" and "Wholesale and Retail Trade" sectors.

Table 5.7 shows the estimated increase in employment, or the annual rate of employment for each sector, depending upon which approach was taken. We will take each group of sectors as they were mentioned in the text. It is worth adding to what was said in the text concerning our estimates of employment growth, that they are only "best guesses" and are not accurate indications of future employment growth. They may however be seen as useful in assessing the kinds of jobs which the currently envisaged economic growth will generate. The manufacturing sector is expected to expand fairly rapidly, from 1975, and other sectors are likely to continue at a similar rate of expansion to that experienced previously. It was thought worth the effort involved in making this estimate despite the weaknesses of data and the questionable assumptions used in order to obtain some idea of the future demand for labour. Our estimates have deliberately been conservative ones, and the actual shortfall between the demand for labour and its supply is likely to be even greater than the one we have discovered in this assessment.

Our first group of economic sectors includes "Agriculture and Fishing", and "Oil". Employment in the former rapidly increased from 1965 to 1970 at 15% per annum, but the absolute level of employment in 1965 was very low. Kuwait has a very limited potential for arable agriculture, and the main expansion seems likely to be in the "intensive farms" and in the employment of the fishing fleet. Total employment was assumed to increase at 4.4% from 1970-1975 and at 5.5% from 1975-1980.

The oil industry which is kept distinct here from petrochemicals, fertilizers, etc. (though these are oil related) was, by 1965, very capital intensive. Total employment rose between 1965 and 1970 by 180 persons. The government has said that output is to be held at 3 million barrels per day, and no new oil fields are likely to come on stream, as none are required. A nominal additional employment of 100 was entered in both periods.

Group II includes the "Manufacturing" and "Construction" sectors. These two sectors are the most difficult in which to estimate future employment. The Manufacturing Sector expanded on similar lines in 1970-1975 to that in the period 1965-1970, but between 1975-1980 there will be a considerable increase in industrial investment and manufacturing activity. For the period 1970-1975 information concerning the "Licensed Industrial Projects" was used. The Licensing Committee in 1973 announced that twenty-seven establishments had obtained licenses, and would employ 986 persons, as Table 5.8 shows. Industrial licenses granted in 1973 would almost certainly not commence production before 1974. If we assume that by 1973 industrial investment was beginning to pick up, then 1975 was a year in which the maximum increased employment occurred, between 1970-1975. A total of 3,000 additional manufacturing sector jobs for the period 1970-1975 implies an average annual increase of about 600 jobs, which is consistent with the information gained from the Licensing Committee.

The period 1975-1980 presents greater problems in the estimation of additional employment. Realised investment may be quite different from currently proposed investment. It was decided to use the Ministry of Commerce and Industry figures for the period. While our estimates of additional employment in the Manufacturing Sector may not be precisely accurate, they do provide the opportunity to examine the overall effect of this level of investment.

The Ministry of Commerce and Industry divides the proposed investments under its supervision into two groups: "Consumer-orientated projects" and "Export-orientated projects". Tables 5.9 and 5.10 give details of the proposed investments together with employment estimates. Not surprisingly, there are fewer "export orientated" projects and they tend to be on a much larger scale than the "consumer orientated" projects. According to our estimates, additional employment in the Manufacturing Sector from 1970-1975 was 3,000, and from 1975-1980 it was 10,500.

Construction Sector employment consists of the total of all jobs up from employment on construction sites in the country. When a project finishes, so also does the associated employment. For construction industry employment to remain constant, the same investment must be made year after year (assuming a one year life of projects), and as a result, total employment in this sector rises and falls more dramatically than in any other.

The general level of government activity and expenditures is perhaps the most important factor affecting construction sector employment. This is particularly true of employment in infrastructural or industrial projects, where the government is almost always involved. Also, through payments to the "Land Purchase Scheme" the government indirectly affects private construction. To estimate the growth of employment in this sector, we should distinguish between three main

categories - infrastructural; industrial; private dwellings and possibly another category might be "other buildings". For all categories the balance of government revenue over government spending is crucial. Table 4.49 shows the fluctuations in this balance, and Table 4.47 the same for payments to the Land Purchase Scheme. Rather than devote one chapter to this topic, we make the simplifying assumption that there is a net decrease in employment of 1,000 persons from 1970-75 and a net increase of 16,000 persons from 1975-1980, the period when the proposed manufacturing investments begin to have an effect. This is not an ideal way of estimating additional employment, but to attain a significantly better estimate would absorb a disproportionate amount of time.

Group III includes those sectors usually described as "tertiary". Employment in these sectors would tend to increase with population growth, increase disposable income and increased manufacturing and construction activity. There is no very precise method of estimating the actual rate of increase, and as has already been pointed out, the approach used here is somewhat ad hoc. An upper limit to employment expansion was taken to be the rate of increase between 1965-1970. A lower limit was taken as 1% per annum. The actual rate used varied with each sector, and was set by taking into account the above, together with the rate of increase between 1965-1970.

In the text the implications of using estimates of employment growth which were too low were discussed, and it only remains to be added here that the rates were chosen in order to depict a scenario of Kuwait's economic development, which principally includes considerable development of the Manufacturing Sector with a moderate expansion in other sectors. This would coincide with what actually does seem most likely to occur.

Having estimated the additional employment sector we distribute it between different skill levels using the occupational blend existing in 1970, both in 1970-75 and 1975-80.. The distributions were made on a sectoral basis, and Table 5.11 shows the occupational distribution in 1970 by Sector. The summary of employment in 1975 and 1980 shown on Table 5.12 was calculated by using the relative distributions between occupational groups of Table 5.11 and the employment totals of Table 5.7.

Between 1970-75 and 1975-80 some active Kuwaitis will die or retire from the labour force. The approach taken of distributing one third of all active Kuwaitis aged between 50-64 between occupational groups, first in 1970-75 and again in 1975-80 was mentioned in the text. Table 5.13 gives the number of Kuwaitis dying or retiring, by occupational group in each period.

5.6. The Supply of Labour.

The supply of entrants to the labour force is required for each year between 1970 and 1980. The supply under consideration is only that of Kuwaitis, the non-Kuwaiti supply being assumed completely elastic at existing differentials between wages and salaries in Kuwait and elsewhere.

The minimum age below which it is illegal to work in Kuwait is 14. Therefore for each year between 1970 and 1980 we calculate for those Kuwaitis over 14 years how many continue schooling or drop out and enter the workforce, for which we require total enrolments, the drop out, pass and repeater rate at each level. The data for this estimation came principally from two sources: (i) Ministry of Education Yearbooks, of which the most recent was printed for 1972/73; (ii) a series of short statistical forecasts and projections made by the Technical Coordination Department of the Ministry of Education. As well as these two sources, reference was made both to Planning Board off prints and notes made by individual establishments.

In this estimation of future output of schools and institutes there are a number of limitations which should be mentioned:

- (i) No effort has been made to forecast pupils attending religious schools and institutes, as very few students attend them.
- (ii) No effort was made to project enrolment or output of Private schools in Kuwait. The data for them are very limited; the Kuwaiti government provides education for all Kuwaitis, and so few Kuwaitis should be in these schools. Private schools are, in the main, run for the benefit of expatriates.
- (iii) Students either pass, repeat or drop out from any year. However, when estimating the rates, it was found that numbers did not always add up in Ministry Yearbooks. It was therefore assumed that all students

who passed an examination in Stage 1 proceeded to Stage 2, and that the remainder of total enrolment in Stage 2 was composed of repeaters from the previous year. At that point, drop-outs from Stage 2 in the previous year were calculated.

(iv) Where projections of performance rates were necessary, they were done in such a way as to be in harmony with the rates of 1965-1970. In situations which warranted an improvement in performance rates, one was gradually made. It must be stressed that by and large, the prevailing performance rates, good or bad, were used, and no dramatic improvements have been built into the performance of students at any stage. If a change is made, it is mentioned in the relevant sections following.

(v) In government schools both Kuwaiti and non-Kuwaiti students are found. To extract male Kuwaiti numbers and rates was a somewhat hazardous affair. Data were presented generally in a highly aggregated form, and required disaggregation. Total enrolment and performance rates are presented here, which are believed to be substantially correct, but they may have inaccuracies included in them. It is difficult to see an alternative and more accurate approach to discovering these rates than the one used here; namely, armed with every Ministry of Education Yearbook, a considerable quantity of other statistical information provided by the Ministry of Education, information provided by the institutions and schools themselves, attempt to build a consistent model which fits the most reliable data available.

(vi) In making estimations of future enrolment in the first stage of Primary for the years after 1970, a revised population estimate for the "0-5" age range was used, which corrected the supposed undercounting in 1970.

The general direction which the projections here give the educational system is largely to continue the previous paths of development.

In the past, while manpower requirements have been noted, the overall structure has changed very little. The reasons for this are possibly that (a) the system is too large and (b) administrative decisions must pass many channels before they result in practice. This projection will show what the future is likely to be without education adjusted to manpower requirements.

Given the estimates of total enrolment and performance rates, each grade of each schooling level was calculated for promotions and drop-outs. The graduates and drop-outs were then assigned to one of seven educational groups into which occupations which required a similar educational background were also divided. The output of each level will be dealt with separately, and the results summarised on Table 5.33, which shows the educational composition of Kuwaiti male youths available for entry into the labour force 1970-1980.

a) Primary Education.

Table 5.14 lists the population aged six at each calendar year, and an estimate of the enrolment ratio which shows those not entering school and those entering school. The population aged six is based on the 1965 and 1970 populations corrected for undercounting. The "enrolment ratio" is shown after 1973 to be slightly improving as the cohort of Kuwaiti boys aged six diminished and national efforts to educate the unschooled 13% of all male six year olds in 1970 intensify.

Education in Kuwait is not only free to Kuwaitis but is compulsory up to the end of Intermediate schooling. Annual examinations only register progress and are not selective. However, they do control the rate of progress from one stage to the next. Therefore, theoretically, no student actually leaves school before the age of 14, although on failing an exam he may repeat a year. He may repeat each year as he progresses, only to reach Intermediate will take twice as long.

Therefore it has been assumed that the only "wastage" at this level is that due to those pupils who "never entered" school at age six, and no "drop-out" rates are shown on Table 5.15, only "pass" and "repeater" rates.

A child aged six in 1962 is aged 14 in 1970, so the "never entered school" column of Table 5.14 in 1962 enters the Summary Table in 1970 as the supply for the group of occupations which are "unskilled, and require no special education or training", - "D". There being no other drop-outs from Primary in any stage, those persons are the only ones entered in that group. It may seem a little unrealistic to assume that no graduate of Primary school will ever work in a labouring job, and two points should be mentioned. First, we are describing the way Kuwaitis, mostly boys, enter the workforce, and it is thought that even if they only have the Primary Certificate they will attempt to obtain a job better than the most menial. Second, this assumption does reduce the accuracy of the assessment, but to introduce a sophisticated adjustment to allow for this would suggest a degree of precision we do not have. In this assessment we often find ourselves with this type of dilemma, and every effort is made to point out the effect of our assumptions. The promotion and repetition figures in Table 5.15 are used to project the output from the Primary Stage up to 1980, which are in turn fed into the Intermediate Stage.

b) Intermediate Stage.

A child in the fourth grade of Primary can either move on to the first grade of Intermediate School, repeat the year, or drop out. The evidence to hand suggests that Kuwaiti boys who are successful in the final exams of the Primary level do pass on to the first year of Intermediate, and those who are not successful repeat the final year. There is, then, no leakage from the system at that point.

Although the Intermediate level is compulsory, there are significant numbers of drop-outs, particularly amongst Kuwaiti boys. If a child leaves the first stage of Intermediate school, aged 10, he enters the labour force four years later. Therefore we need to know the number of pupils dropping out from Intermediate school in 1966/67 and thereafter, entering the labour force in 1970, and Table 5.16 shows this.

To project drop-outs by stage from 1970 to 1979/80 we require some estimate of performance rates, accession rates from the Primary to the Intermediate level, and total enrolment in each stage in 1970. Table 5.17 shows the average of pass, repeater and drop-out rates from 1966/67 to 1970/71, and Table 5.18 shows our projection of male Kuwaitis in the Intermediate stage up to 1979/80, using the data on Table 5.17. No improvement is made to those very poor performance figures, as it is thought that the increase in student numbers and the relatively small number of teachers planned to enter the Intermediate level will combine to maintain this kind of performance.

Table 5.18 shows actual figures for 1970, 1971 and 1972, and thereafter projected ones, as the actual figures were available for those years. The drop outs in each year are entered on the Summary Table, under the year in which they enter the labour force. Those who "pass" in Stage 4 provide the material for the three types of secondary school education.

c) Secondary.

The Secondary level divides between three types of education; Secondary General, Secondary Commercial and Secondary Technical. Successful students from Intermediate Stage 4 are permitted to pass on to one of these stages, and the evidence to hand suggests that students who are given the opportunity, accept it.

Between 1968 and 1970 General Secondary education took the great majority of students from the Intermediate level, about 85%, as Table 5.19 shows. However, it was a slightly diminishing share, while the Commercial School share was slightly increasing. Besides that slight development, no major change was observed in student preferences. Recently however, great emphasis has been made on the possibility of expanding technical education. Table 5.20 makes an allowance for an increase in the number of technical students, raising the overall share to 14.0% by 1973. Commercial Secondary education's share is held at 5.2% and general secondary is lowered to 80.8%. This allocation seems reasonable in the light of student preferences, teaching capacity and existent laboratory facilities in the Technical school. Table 5.21 shows the actual numbers proceeding to each type of school, which will be used as first year enrolments in tables relating to each type.

d) General Secondary.

The large majority of students who graduate from the Intermediate level pass on to "General" secondary. The education given in General Secondary is similar to that given in Intermediate, but there is a choice in the third year between the "Science" specialism and the "Arts" specialism. It is only by achieving a satisfactory pass in the final examinations of Secondary "General" that entry to University at home or abroad is possible, and this explains some of the popularity of this type of secondary education.

The performance rates of Kuwaiti men in the secondary level are shown by each stage and for each specialism in Table 5.22, 1968/69 to 1970/71. The projected performance rates, also shown on this table, have been constructed to include the trend shown in the previous three years' rates.

Besides the performance rates at each grade, it is necessary to know the numbers choosing science and choosing arts specialisms in

the third year. It was found that the trend suggested a future share of 63% of students opting for Science and 37% of students opting for Arts, and this division was used throughout the period.

In view of the considerable detail involved in illustrating the disposition of students in the Secondary stage, Table 5.23 is a summary of the salient outputs, namely total enrolments by stage, drop-outs by stage and graduates from the 4th Stage. The drop outs by stage are entered in the Summary Table as "not completing Secondary".

The alternatives for graduates of the Secondary level are either Teacher Training or University, and these are dealt with after the remaining two elements of the Secondary level, technical and commercial secondary, are considered.

e) Technical Secondary.

Estimating performance rates for the Technical school is an extremely hazardous task. Particularly in the first year of study, pass rates fluctuate violently from 47% in 1970 to 68% in 1971. In view of these variations, a less sophisticated approach is used for projecting future output, namely to estimate only pass and failure rates, and to assume that no-one repeats, although obviously some do. The performance rates are estimated on 1970 and 1971 figures, for which the average is shown on Table 5.24. After a very high attrition rate in the first year, the situation improves considerably in the following years. Also, the simplifying assumption is made that all students read the same course, although in fact students divide between "craftsmen" and "pre-technicians". The output of students from this secondary school is assumed to find employment in the group of occupations described as "skilled manual workers", as this is roughly what their training equips them for. It might be argued that some of the better students could act as "Technicians", though the view of the technical school staff is that this would be unlikely

to be the case for more than a handful of students.

The disposition of students by year is shown on Table 5.25. Both the students who "drop-out" and those who "pass" in the fourth year are entered in the Summary Table as entering "skilled manual occupations".

f) Commercial Secondary.

There is only one commercial secondary school for boys in Kuwait, and it is very small, accounting for approximately 5% of all secondary school male Kuwaiti enrolment. There is no additional expansion planned for commercial secondary schooling, and the increase in enrolment is the consequence of increasing numbers of graduates from the Intermediate level.

The performance of students is very high in the commercial school, average pass rates in yearly examinations being 96%, 96%, 97% and 99% from the 1st grade to the 4th. These rates have been used to project the future disposition of students which is given in Table 5.26. As was done in the Technical Secondary school all students are divided between those who pass and those who fail and leave the school. Those who leave the commercial school are listed on the Summary Table as not having completed Secondary education, and those who graduate are listed as having secondary certificates, but not entering further education.

g) University.

The only form of secondary education which provides access to University education is the "General Secondary". University enrolment is divided here between "Science" and "Arts", corresponding to the student specialisms in General Secondary.

h) Science Students.

From Table 5.23 the number of graduates from the secondary science stream is obtainable. Between 1970/71 and 1972/73, the percentage

of graduates entering the science university stream was 29.4%, 9.0% and 12.0%. This low accession rate has been commented upon by officials and it is hoped to raise it. Table 5.27 shows the rates for these three years and the projected accession rate from 1973/74 to 1979/80, as a gradually rising one. It is thought that the accession rate will rise for two reasons. First, as mentioned, planners of education hope to see this rate rise, and incentives to encourage students are likely. Second, there is a move to educate more Kuwaitis in Kuwait and not to continue the expensive operation of educating at University level abroad. Moreover, in the past, students have been sent abroad because particular courses of study were unavailable in Kuwait. The expansion of facilities and courses in Kuwait University Science Department will remove that encouragement to study abroad, and lead to higher accession rates. Also shown on Table 5.27 is the number of graduates from "Science" secondary and the number who go on to University.

Student performance in the science stream at the University has been very poor, especially in the first stage, and for 1970/71 to 1972/73 rates are summarised on Table 5.28. The low pass rate for the 1st stage, of 56%, is immediately apparent. Concern has been expressed over these figures and it is thought most likely that there will be an improvement in the first stage, while current rates in the other stages seem reasonable. Table 5.29 shows the improving rate, beginning from 1972/73 with 60% passing, and rising to 80% in 1980/81 and remaining there until 1980.

Using the first year enrolments from Table 5.27 and the performance rates shown in Table 5.29, Table 5.30 has been constructed to show the disposition of students up to 1979/80. Here, as in the Technical and Commercial Secondary schools, students are divided between those who pass and those who fail. Those who fail, and drop out, are entered on the Summary Table as having "one to three years post secondary education",

while those who graduate are entered as having "University Degrees".

(i) Arts Students.

Unlike science graduates of the secondary schools who appear to avoid further study, the majority of secondary school arts graduates proceed to University to read either Social Sciences, Law or Liberal Arts. These three groups are regarded as a single unit for the purpose of this estimation. However, as numbers in the secondary level expand, it is thought unlikely that the same high proportion will continue on to University as in the past. Therefore, an estimate of the likely numbers who will enter University from secondary school was made accordingly.

Performance rates are relatively good in the Arts Faculties, there being on average for 1970/71 to 1972/73, 80%, 95%, 95% and 95% with passes, from the 1st to the 4th stages. Table 5.31 shows the graduates from Secondary enrolling in the first stage of University; those who do not enrol and the disposition of students by stage from 1970 to 1980. Again, the simplifying assumption is made that a student either passes or fails. Students are entered on the Summary Table as for the Science section, and students are entered on the Summary Table similarly.

j) Teacher Training.

To be eligible for Teacher Training after 1970 (a year in which considerable reforms were made to Teacher Training), it is necessary to be a secondary school graduate. The most able students enter the University, and the remainder enter either Teacher Training or the labour force.

Table 5.32 shows those not entering University, and those entering Teacher Training, the difference being those who enter the labour force as secondary graduates, with commercial school graduates.

Since the Teacher Training Institute accepted its first students in 1972/73, Planning Board estimates of enrolment and performance rates

are used entirely here. It appears that the Planning Board does not envisage as many Kuwaiti teachers being trained over the next fifteen years as might have been expected. The disposition of male Kuwaiti students is shown also on Table 5.32 for each stage. Drop outs from the first year are entered on the Summary Table as having completed only secondary, and from the second year, with graduates as having one to three years post secondary education.

k) Students Studying Abroad.

As an estimate it is assumed that every five years there will be a graduate crop of 130 students from overseas universities, which will all have science-orientated degrees. However, in this estimate of supply, we have assumed that after 1970 no student will study abroad. Therefore, if in fact Kuwait continues to send students abroad it will mean that fewer actually pass on to Kuwait University, but none will be lost in the overall description, only the origin of their degree will be different.

l) Supply of Kuwaiti Women.

Estimates of the supply of women to the labour force are not made in the same way as for men, for two reasons: (a) while almost all Kuwaiti men between the ages of 15 and 60 work, only 2.3% of all Kuwaiti women do so. Therefore, it is inadequate to assess the output of girls' schools and institutions and assume that all will eventually work. It is also not possible to know what proportion of girls from each type of school do work, except on a five year summary basis, using Census data; (b) the pattern of participation by age differs from that found amongst men. Most active Kuwaiti women enter the labour force between the ages of 20 and 24, then leave and rejoin the labour force ten to fifteen years later.

A different approach is therefore utilised to that used for men,

which relies on a projection of participation rates by age and a series of assumptions concerning entrants to the workforce. Namely, the evidence to hand suggests that the traditional barriers to the employment of women are being overcome by virtue of improved qualifications, and in the future new entrants to the workforce will have either university degrees, post secondary certificates or secondary certificates.

The female Kuwaiti population aged 10 to 65, 1970-80 is shown on Table 5.34. The projection is made using the mortality rates shown, which, when combined with the current Kuwaiti birth rate produces an overall rate of population growth of 3.2% p.a. To find the participation rate by age cohort in 1970 we require the number of women gainfully occupied, and this is also shown on Table 5.34, with the participation rate. It will be seen that the cohort with the largest participation rate is the "20-24" cohort. It is thought that it is in this cohort that the most significant increases in employment will occur. It is estimated that while there will be a small increase in participation in the older cohorts, that the rate in the "20-24" cohort will rise from 5.5% in 1970 to 8.0% in 1975, to 12.0% in 1980. The overall crude participation rate will rise from 2.3% in 1970 to 3.9% in 1980, and in absolute terms, from 2,053 persons in 1970 to 5,117 persons in 1980. It should be stressed that this is thought to be a maximum limit to women's employment rather than a minimum, and Table 5.34 shows those occupied by cohort up to 1980.

Having estimated the additional supply of women entrants to the labour force to 1980, we need to know what qualifications they have and hence what employment they will take. Table 5.35 shows, for each age cohort, the educational attainment and the number of persons gainfully employed. It is immediately obvious that the share of "illiterates" decreases as the age of the cohort falls. Not surprisingly this Table reflects the effect of the expansion of education which began in the

early years of the fifties. It also shows that recently there has been a greater propensity to accept employment by women, and for further illumination on that point we should consider Table 5.36. This table shows that almost half of all employed women have at least a secondary certificate. Close inspection of both tables shows that the majority of the 69½ working women with secondary certificates must be 29 years of age or less, as few women in 1970 older than that actually had secondary certificates. This point is emphasised still more strongly for women with University degrees, and here 83.1% of all women below the age of 29 years must have been occupied if the Census is accurate, and almost certainly a large percentage less than 29 years were occupied. The conclusion to be drawn from these two tables is that the majority of the women entering the workforce after 1970 possessed high academic qualifications in comparison with those of their mothers.

Table 5.34 shows that in comparison with the total female population, relatively few women entered the workforce. Certainly, the periodic increase could be met by the output over the same period of womens' secondary schools and institutions. Therefore, as an estimate of the qualifications of women entrants to the workforce, it is to be assumed that the increase in total employment is provided by girls' secondary schools, girls' teacher training institutions and the University. Table 5.37 shows the number of each kind entering the workforce over each five year period. The number of women graduating from the University and the Teacher Training Institute is shown here as the same as the number of men who do so, although in fact more women graduate from the University than men. The difference between those graduating from University, Teacher Training and the net increase in employment of women is made up by graduates of the secondary schools. The number of secondary school women graduates entered as joining the labour force represents less than one quarter of the total secondary output.

The development of the employment of women in Kuwait and similar Gulf States is a study in itself. Traditional disincentives to women working are still strong in Kuwait, and for that reason it is anticipated that, for example, no more than a quarter of all secondary graduates will actually work.

It is assumed that all girls with degrees enter Professional Occupations (A-2), requiring an Arts degree, since very few read Science at University. Those with post-secondary qualifications naturally enter "Sub-Professional Occupations" (B), and those with secondary certificates enter "Skilled Office Occupations" (C-1).

Table 5.38 summarises the supply of Kuwaiti male youths, 1970-75, 1975-80, and is taken from Table 5.33. Table 5.39 summarises Tables 5.37 and 5.38, the Kuwaiti male and female labour supply, 1970-75, 1975-80, and is entered on Table 5.40, III.1. in columns 7 and 13.

5.7. Resolution of Demand and Supply.

Using the estimates of the total number of job opportunities, and the supply of Kuwaiti labour, Table 5.40 is constructed. Column (1) shows the now familiar occupational groups "A-1" to "D"; Column (2) shows total employment in 1970. Column (3) shows the number of non-Kuwaitis employed in 1970, who represent "additional job opportunities". Column (4) shows the new jobs generated over the period in question. Column (5) gives the Kuwaiti wastage due to death and retirement. Column (6) totals Columns (3), (4) and (5), and shows the total number of job opportunities for Kuwaitis from 1970 to 1975. This includes all non-Kuwaitis in Kuwait in 1970, and extra jobs derived from economic expansion, all those jobs which fall vacant as a result of Kuwaitis dying or retiring. Column (7) is the supply of Kuwaiti labour coming on to the market from schools and other educational institutions in the relevant period. Column (8) shows the overall shortage (-) or surplus (+) of Kuwaitis in an occupational group. A shortage is assumed to be met by non-Kuwaiti labour. A surplus indicates an excess supply of Kuwaitis and presumably their unemployment. But there are no "surplus" Kuwaitis evident in the labour market. On the contrary, the opposite is true; there are considerable shortages of Kuwaitis in every occupational group.

There is one important assumption which this table makes, namely that persons with particular skills and education will enter the labour market for jobs which require those qualifications. This point was discussed in the text. Also, we are assuming that the elasticity of substitution between occupations is zero, or at least is low enough not to alter substantially the balance of demand and supply as shown on the table. This assumption is quite reasonable here. We have estimated "Demand" for and "Supply" of labour on an "Occupational Group" basis, and however high the elasticity of substitution may be within an occupational group, we believe that the elasticity of substitution

between occupations in different groups is probably low enough not to affect our results.

APPENDIX.TABLE 5.6. EMPLOYMENT BY ECONOMIC SECTOR, 1965 AND 1970.

<u>Sector</u>	<u>1965</u>	<u>% Share</u>	<u>1970</u>	<u>% Share</u>	<u>Annual Growth Rate</u>
Agricultural	1983	(1.11)	4060	(1.7)	15.0
Oil Industry	6992	(3.9)	7172	(3.1)	0.5
Manufacturing	17942	(10.01)	32091	(13.7)	12.0
Construction	28848	(16.09)	33670	(14.4)	3.0
Electricity	6991	(3.9)	7252	(3.1)	0.7
Wholesale and Retail Trade	23045	(12.8)	33010	(14.1)	7.5
Transport, Storage and Communications	10025	(5.61)	12137	(5.2)	4.0
Services	82534	(4.6)	104142	(44.4)	5.0
Total	179284		234355		5.5

Source: Taken from: Planning Board, Census 1965 and 1970, Kuwait.

**TABLE 5.7. EMPLOYMENT IN 1970
AND ESTIMATES FOR 1975 AND 1980, BY ECONOMIC SECTOR.**

<u>Group</u>	<u>Sector</u>	<u>1970</u>	<u>1975</u>	<u>Rate of Growth</u>	<u>Additional Employment</u>	<u>1980</u>	<u>Rate of Growth</u>	<u>Additional Employment</u>
I.	Agriculture & Fishing	4,060	5,060	4.4		6,560	5.3	
	Oil	7,172	7,272		+ 100	7,372		
II.	Manufacturing	32,091	35,091		+ 3,000	45,591		+ 10,500
	Construction	33,672	32,672		- 1,000	56,672		+ 24,000
III.	Electricity, Gas & Water.	7,252	8,252	1.5		9,252	2.3	
	Wholesale & Retail Trade	33,010	36,010	1.6		39,010	1.5	
	Transport, Storage & Communications	12,137	14,137	3.0		16,137	2.7	
	Personal and Social Services	104,952	125,321	3.6		149,957	3.7	
		234,354	263,451	2.3		329,551	4.6	

Source:- Figures for employment in 1970 taken from 1970 Census, Kuwait:

TABLE 5.8. EMPLOYMENT GENERATED BY PROJECTS LICENSED IN 1973.

<u>Industrial Activity</u>	<u>Estimated Labour Force</u>
Sugar	122
European Bread	10
Ice	9
Fruit Juice	30
Soft Drinks	78
Animal Feed	12
Copy & notebooks	16
Cement paper sacks	19
Paper & Envelopes	11
Paper & Plastic Bags	12
Sanitary Products	78
Hydrogen Oxide	19
Dry Batteries	44
Bottling Carbon Gas	21
Carbon Dioxide Gas	10
Carbon Dioxide Gas	5
Powder, Cream, Candles	13
Glass for car windows	21
Crushed stones	149
Artificial crushed stones	50
Insulating material for construction	11
Cement roofs	27
Aluminium roofs	18
Galvanized metal pipes	40
Central Air-conditioning apertures	11
Metal furniture	82
Electric Lamps	67
Total	986

Source:- The Arab Economist, May 1974, Table 2, p.60.

TABLE 5.9. EMPLOYMENT ESTIMATES OF CONSUMER ORIENTATED PRODUCTS FOR THE NEXT FIVE YEARS, 1974.

<u>Industrial Activity</u>	<u>Investment Estimates, (in 000's K.D.'s)</u>	<u>Production Estimates</u>	<u>General Remarks</u>	<u>Likely Employment at full Capacity</u>
Iron Production	35,000	3,000 tons (construction iron).	Starts up 1976. John Miles & Partners, Croydon. Govt. Participation, Licensed 1973.	800
Sugar Refining	2,000	300,000 tons p.a.	Licensed in 1973	122
Gravel & Mosaic Stones	2,000	300,000 tons	Licensed in 1973. Local Company.	299
Dry Batteries	600	15 Mn. Units.	Partly licensed 1973. Local Company.	88
Chemical Detergents	750	3,000 tons p.a.	Local company licensed 1974-75.	100
Galvanised water tubs and joints	750	15,000 tons p.a.	Partly licensed 1973.	60
Tubes with spiral welding	1,500	40,000	Expansion of present plant	120.
Plastic packing bags	150	36 Mn. Propulene bags.	Plant supplied by Fairbain Lawson Machinery (Synthetics), May 1974.	51.
Oil & margarine	1,000	6,000 tons p.a.	Licensed 1974-75.	100
Compressed wood & veneer	4,000	11,000 ³ m.	Probable licensing date 1974.	100
Cement (Portland)	16,000	700,000 tons p.a.	Probable licensing date 1974.	2,000
Dry docks	2,000	Maintenance of fishing fleet.	Ready for Dec. 1976. Kuwaiti Local Company. Consultants: Associated Marine Consultants (Amsterdam).	2,000
Pharmaceuticals	1,500	75 Medical items	Preparation of Implementation Studies seeking License in 1974.	100
Metallic Office Furniture	750	2,500 tons p.a.		60
Spinning & weaving	8,000	20 Mn. metres	Seeking licensing in 1974.	200
Tanning & Wool	500	6 Mn. sheep & goat leathers.	Seeking licensing in 1974	50

Total Investment:

K.D. 101.5 Mn.

Note: Employment figures are partly personal estimates and partly government estimates.

Source:

- (1) Strategy and Prospects of Industrial Development in Kuwait, Tripoli, April 1974, page 30 (Arabic).
- (2) Arab Economist, May 1974, Tables 2 & 3.

**TABLE 5.10. EMPLOYMENT ESTIMATES FOR EXPORT ORIENTATED PROJECTS
FOR THE NEXT FIVE YEARS.**

<u>Industrial Activity</u>	<u>Development</u>	<u>Employment Estimates at full capacity</u>
Primary Oil Lubricants	Preparation of implementation studies.	200
Liquified Petroleum	Preparation of implementation studies.	750
Primary and Intermediate Petrochemicals	Preparation of implementation studies.	500
Melamine	Preparation of implementation studies.	250
Fertilizers	Preparation of implementation studies	300
Aluminium Smelter		2,000.

Note: Employment estimates based on experience of Bahrain's Aluminium Plant, and for fertilizers, current Capital/Labour ratios in Fertilizer Industries.

Source: The Strategy and Prospects of Industrial Development in Kuwait, op.cit., 1974.
Table 24, p.31 (Arabic).

**TABLE 5.11. A MATRIX OF EMPLOYMENT IN EACH GROUP OF OCCUPATIONS,
BY ECONOMIC SECTOR FOR 1970.**

Occupation Group	<u>A1:</u>	<u>A2:</u>	<u>B:</u>	<u>C1:</u>	<u>C2:</u>	<u>C3:</u>	<u>D:</u>	<u>Total</u>
<u>Sector.</u>								
Agriculture & Fishing	59	30	203	161	119	132	3354	4060
Oil	264	217	1162	1066	1443	1528	1492	7172
Manufacturing	565	439	2084	1505	13403	6298	7797	32091
Construction	945	397	3140	1039	10690	6371	11090	33670
Gas, Electricity and Water	303	126	780	1497	2923	145	1478	7252
Transport, Storage and Communications	136	358	976	1416	1344	7618	7139	12137
Wholesale & Retail Trade	180	1002	325	14068	1104	12544	3787	33010
Social and Personal Services	1526	7783	11874	13076	9093	11480	50040	104957
Total	3978	10352	20544	33828	40119	39266	86177	23439

Source: Abstracted from Planning Board, Census 1970, Kuwait, Table 17, p.82.

TABLE 5.12. TOTAL DEMAND FOR LABOUR BY OCCUPATIONAL GROUP IN 1970, 1975 and 1980, ASSUMING ECONOMIC GROWTH.

Occupational Groups	Total Employment		New Jobs		Total Employment		New Jobs	
	1970	1975	1970-1975		1980		1975-1980	
Professional and Scientific Occupations usually requiring a Science/Maths based University Degree (A-1):	3,978	4,387	409		5,701		1,314	
Professional Occupations, usually requiring an Arts based University Degree (A-2):	10,352	12,040	1,688		14,493		2,453	
Sub-professional occupations and technical occupations, usually requiring one to three years post-secondary education (B):	20,544	23,268	2,724		29,357		6,089	
Skilled office occupations, usually requiring secondary completion (C-1):	33,828	38,198	4,370		44,299		6,101	260.
Skilled manual occupations, usually requiring vocational and/or training related classroom instruction (C-2):	40,119	43,559	3,440		58,488		14,929	
Semi-skilled manual occupations, usually requiring literacy plus on-the-job training (C-3):	39,266	42,955	3,689		53,851		10,896	
Unskilled manual occupations, not requiring special education or training (D):	86,177	98,680	12,503		123,214		24,534	
Total	234,264	263,087	28,823		329,405		66,316	

Source:- Calculated from the data on Tables 5.7 and 5.11.

TABLE 5.13. NUMBER OF KUWAITIS DYING OR RETIRING FROM THE WORK-FORCE, 1970-75 TO 1975-1980.

<u>Occupational Group</u>	<u>1970-1975</u>	<u>1975-1980</u>
Professional and Scientific Occupations, usually requiring a Science/Maths based University Degree (A-1):	50	72
Professional occupations usually requiring an Arts based University Degree (A-2):	190	275
Sub-professional and technical occupations, usually requiring one to three years post secondary education (B):	44	729
Skilled office occupations, usually requiring secondary completion (C-1):	535	895
Skilled manual occupations, usually requiring vocational and/or training related classroom instruction (C-2):	416	540
Semi-skilled manual occupations, usually requiring literacy plus on-the-job training (C-3):	587	834
Unskilled manual occupations, not requiring special education or training (D):	1,307	1,821
Total	3,129	5,166

Source: See text.

TABLE 5.14. KUWAITI MALE POPULATION SIX YEARS OLD: SCHOOL ENTRANTS AND NON-SCHOOL ENTRANTS.

<u>Year</u>	<u>Kuwaiti Population aged 6.</u>	<u>Enrolment Ratio</u>	<u>Those Entering School</u>	<u>Those not entering school</u>
1962	3243	.87	2822	421
1963	3677	.87	3199	478
1964	3812	.87	3317	495
1965	4247	.87	3695	552
1966	4681	.87	4072	609
1967	5116	.87	4451	665
1968	5550	.87	4829	721
1969	5985	.87	4829	778
1970	6395	.87	5561	834
1971	6651	.86	5711	940

Source: Based on Tables 3.18 and 3.20 and 6.1.

TABLE 5.15. AVERAGE PASS RATES, 1967-1970 IN THE PRIMARY LEVEL,
BY GRADE, FOR KUWAITI MEN:

<u>Grade</u>	<u>Pass Rate</u>	<u>Repeater Rate</u>
1	79.0%	21.0%
2	78.0%	22.0%
3	73.0%	27.0%
4	77.5%	22.5%

Source: Abstracted from Ministry of Education, Annual Yearbook, 1967/68 to 1969/70,
'General Statistics' (Arabic).

TABLE 5.16. KUWAITI MALE DROP OUTS FROM THE INTERMEDIATE LEVEL
ENTERING THE WORKFORCE IN 1970.

<u>Year</u>	<u>1966/67</u>	<u>1967/68</u>	<u>1968/69</u>	<u>1969/70</u>
Total Enrolment:				
Grade 1	3590	4090	4596	5168
Drop Outs	143	163	183	206
Grade 2		3600	3889	4154
Drop Outs		144	155	166
Grade 3			2846	3344
Drop Outs			193	227
Grade 4				2689
Drop Outs				134

Source: As for Table 5.17.

TABLE 5.17. THE AVERAGE OF PASS, REPEAT AND DROP OUT RATES FROM 1966/67 TO
1970/71 IN THE INTERMEDIATE LEVEL FOR KUWAITI MEN.

	<u>Pass</u>	<u>Repeat</u>	<u>Drop Out</u>
Stage 1	68	28	4.0
Stage 2	75.5	20.5	4.0
Stage 3	75.0	18.2	6.8
Stage 4	68.0	27.0	5.0

Source: Compiled from: Ministry of Education, Annual Yearbook, 1966/67 to 1970/71,
'General Statistics', (Arabic).

TABLE 5.18. DISPOSITION OF KUWAITI MALES IN THE INTERMEDIATE LEVEL, 1970/71 TO 1978/79.

Year	1970/71	1971/72	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80
Stage 1.										
New Entrants			4178	4470	4694	5340	4984	6492	6671	
Repeaters			1828	1681	1722	1796	1998	2235	2443	
Total Enrolment	5452	6000	6530	6151	6414	7136	7982	8727	9114	
Pass (68.0%)			4440	4182	4362	4852	5427	5934	6197	
Repeat (28.0%)			1828	1722	1796	1998	2235	2443	2552	
Drop Out (4.0%)	218	240	261	246	256	285	319	349	364	
Stage 2.										
New Entrants			4440	4084	4182	4362	4852	5427	5934	
Repeaters			1003	1115	1065	1075	1114	1223	1363	
Total Enrolment	4402	4600	4896	5119	5247	5437	5966	6650	7297	
Pass (75.5%)			3696	3925	3961	4104	4504	5020	5509	
Repeat (20.5%)			1003	1065	1075	1114	1223	1362	1495	
Drop Out (4.0%)	176	184	195	207	217	238	266	291		
Stage 3.										
New Entrants			3696	4109	3925	3961	4104	4504	5020	
Repeaters			773	813	895	877	880	907	984	
Total Enrolment	3610	3910	4252	4922	4820	4838	4984	5411	6004	
Pass (75.0%)			3189	3691	3615	3628	3738	4058	4503	
Repeat (18.2%)			773	895	877	889	907	984	1092	
Drop Out (6.8%)	245	265	287	334	327	328	338	367	408	
Stage 4.										
New Entrants			3189	3351	3691	3615	3628	3738	4058	
Repeaters			1048	1144	1213	1324	1333	1339	1370	
Total Enrolment	3398	3698	3883	4387	4904	4939	4961	5077	5428	
Pass (68.0%)	2310	2514	2640	2983	3334	3358	3373	3452	3961	
Repeat (27.0%)			1048	1213	1324	1333	1339	1370	1465	
Drop Out (5.0%)	169	184	194	219	245	246	248	253	271	

Source: Compiled by projecting Primary School enrolments, and using performance rates on Table II.4.

TABLE 5.19. SHARE OF THE THREE DIVISIONS OF SECONDARY EDUCATION
OF KUWAITI MEN, 1968/70.

	<u>General Secondary</u>	<u>Commercial Secondary</u>	<u>Technical Secondary</u>
1968	85.4	3.1	11.2
1969	85.4	4.3	10.1
1970	84.0	5.5	10.3

Source: Compiled by examining relative shares in Ministry of Education,
Annual Yearbook, 1968/69 to 1970/71 (Arabic).

TABLE 5.20. PROJECTED SHARES OF EACH SECTOR OF SECONDARY
EDUCATION, 1970/71 TO 1979/80.

<u>Year</u>	<u>General Secondary</u>	<u>Commercial Secondary</u>	<u>Technical Secondary</u>
1970/71	84.0	5.5	10.3
1971/72	83.6	5.5	10.7
1972/73	81.5	5.3	13.2
1973/74	80.0	5.2	14.0
1974/75 to 1979/80	80.8	5.2	14.0

Note (1): 1970/71 actual share, remainder projected.

TABLE 5.21. DISPOSITION OF GRADUATES FROM THE INTERMEDIATE LEVEL BETWEEN THE THREE TYPES OF SECONDARY SCHOOLING, 1970/71 TO 1979/80:

Year: ¹	1970/71	1971/72	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80
Total number of Intermediate Grades:	2218	2641	2880	2880	2983	3334	3358	3373	3452	3961
Those going on to:										
Formal Secondary	1838	2000	2153	2330	2412	2697	2716	2728	2792	2985
Commercial Secondary	122	133	139	152	157	176	177	178	182	195
Technical Secondary:	224	258	349	398	414	460	463	465	478	510
Note (1); 1970/71 to 1972/73, actual figures. 1973/74 to 1979/80, projected figures.										

**TABLE 5.22. PERFORMANCE RATES FOR KUWAITI MEN IN SECONDARY
EDUCATION BY STAGE FOR 1968/69 TO 1970/71 AND PROJECTED FROM
1971/72 TO 1979/80.**

Year	<u>1968/69</u>	<u>1969/70</u>	<u>1970/71</u>	<u>Projection for 1971/72 to 1979/80</u>
<u>1st Stage:</u>				
Pass	76.6	77.6	81.0	80.0
Repeat	11.6	11.1	13.0	13.0
Drop Out	11.6	11.1	6.0	7.0
<u>2nd Stage:</u>				
Pass	75.0	83.6	83.0	76.0
Repeat	17.5	9.3	9.1	14.0
Drop Out	7.5	7.1	7.9	10.0
<u>3rd Stage: Literature</u>				
Pass	91.0	89.0	92.0	88.0
Repeat	8.6	9.3	8.0	11.0
Drop Out	0.4	1.7	-	1.0
<u>3rd Stage: Science</u>				
Pass	80.8	83.9	81.0	82.0
Repeat	12.6	8.5	10.0	11.0
Drop Out	7.6	8.6	7.0	7.0
<u>4th Stage: Literature</u>				
Pass	87.5	75.0	73.0	72.0
Repeat	4.1	11.5	12.0	12.0
Drop Out	8.4	13.5	15.0	16.0
<u>4th Stage: Science</u>				
Pass	72.3	71.1	72.0	73.0
Repeat	17.9	21.3	20.5	20.0
Drop Out	9.8	7.6	7.5	7.0

Source: Table 6.43 and Annual Yearbooks, 1968/69 to 1970/71 (Arabic).

TABLE 5.23. DISPOSITION OF MALE KUWAITI SECONDARY STUDENTS BETWEEN STAGES, 1969/70 TO 1979/80

Year	1969/70	1970/71	1971/72	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80
<u>Stage 1:</u>											
Total Enrolment	1777	1558	1954	2153	2609	2751	3054	3313	3132	3199	3400
Drop Outs	124	109	136	150	182	192	213	217	219	223	238
<u>Stage 2:</u>											
Total Enrolment	1069	1479	1601	1986	2000	2367	2531	2797	2881	2908	3006
Drop Outs	106	147	160	198	200	236	253	279	288	290	300
<u>Stage 3 (Arts):</u>											
Total Enrolment	288	352	400	497	612	629	734	791	873	906	916
Drop Outs	3	3	4	5	6	6	7	8	9	9	9
<u>Stage 3 (Science):</u>											
Total Enrolment	516	613	775	883	1047	1072	1249	1348	1487	1542	1561
Drop Outs (7%)	36	42	54	61	73	75	87	94	104	107	109
<u>Stage 4 (Arts):</u>											
Total Enrolment	279	290	343	446	550	604	625	720	782	861	900
Drop Outs	44	46	54	71	88	96	100	115	125	137	144
Graduates		211	246	321	396	434	450	518	563	619	648
<u>Stage 4 (Science):</u>											
Total Enrolment	361	510	604	755	874	1032	1085	1241	1353	1489	1561
Drop Outs(7%)	25	35	42	52	61	72	75	86	94	104	109
Graduates:	336	372	440	551	638	753	792	904	987	1086	1139

Source: Based on Tables 5.21 and 5.22.

TABLE 5.24. PERFORMANCE RATES FOR TECHNICAL STUDENTS,
1970/71 to 1971/72 AND PROJECTED RATE, 1972/73 to 1979/80

Year:	<u>1970/71</u>	<u>1971/72</u>	<u>Projected rate 1972/73</u> <u>to 1979/80</u>
<u>Stage 1:</u>			
Pass	46.7	68.0	65.0
Fail	53.2	32.0	35.0
<u>Stage 2:</u>			
Pass	94.9	95.8	95.0
Fail	5.1	4.2	5.0
<u>Stage 3:</u>			
Pass	97.5	98.4	98.0
Fail	3.5	1.6	2.0
<u>Stage 4:</u>			
Pass	97.3	100.0	99.0
Fail	2.7	0.0	1.0

Source: Ministry of Education material on the Technical School and Table 6.10

TABLE 5.25. DISPOSITION OF STUDENTS IN THE TECHNICAL SECONDARY SCHOOL, BY STAGE 1970/71 TO 1979/80.

Year	1969/70	1970/71	1971/72	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80
Stage 1:											
Total Enrolment	385	385	255	176	398	414	460	463	465	478	510
Pass (65%)		180	152	114	258	269	299	300	302	309	331
Fail (35%)	150	205	102	62	140	145	161	163	163	167	179
Stage 2:											
Total Enrolment		252	189	170	114	258	269	299	300	302	309
Pass (95%)		230	181	161	108	245	255	284	285	286	293
Fail (5%)	12	13	8	9	6	13	14	15	15	16	16
Stage 3:											
Total Enrolment		168	240	162	161	108	245	255	284	285	286
Pass (98%)		162	236	158	157	105	240	249	278	279	279
Fail (2%)	5	6	4	4	4	3	5	6	6	6	7
Stage 4:											
Total Enrolment		146	153	230	158	157	105	240	249	278	279
Pass (96%)	131	142	153	227	156	155	103	237	246	275	276
Fail (4%)	4	4	-	3	2	2	2	3	3	3	3
1969/70 to 1972/73											269
1973/74 to 1979/80											

Actual figures.
Projected figures.

Source: Tables 5.21 and 5.24.

TABLE 5.26. DISPOSITION OF MALE KUWAITI STUDENTS IN THE COMMERCIAL SCHOOL BY STAGE
1970/71 TO 1979/80.

	1970/71	1971/72	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80
Stage 1:										
Total Enrolment	122	122	139	152	157	176	177	178	182	195
Pass	117	127	133	145	150	168	169	170	174	187
Fail	5	6	6	7	7	8	8	8	8	8
Stage 2:										
Total Enrolment	61	117	127	133	145	150	168	169	170	174
Pass	58	112	121	127	139	144	161	162	163	167
Fail	3	5	6	6	6	6	7	7	7	7
Stage 3:										
Total Enrolment	41	58	112	121	127	139	144	161	162	163
Pass	40	56	110	118	124	136	141	157	158	159
Fail	1	2	2	3	3	3	3	4	4	4
Stage 4:										
Total Enrolment	21	40	56	110	118	124	136	141	157	158
Pass	20	39	51	109	116	112	134	139	155	156
Fail	1	1	1	1	2	2	2	2	2	2

Note: 1970/71 to 1972/73: Actual figures
1972/73 to 1979/80: Projected figures.

Source: Table 5.21. and see text.

TABLE 5.27. PROJECTED ACCESSION RATES FROM SECONDARY SCIENCE TO UNIVERSITY SCIENCE, 1970/71 to 1979/80.

	1970/71	1971/72	1972/73	1973/74	1974/75	1975/76	1976/77	1977/78	1978/79	1979/80
Secondary Science										
Graduates	336	372	440	551	638	753	792	905	987	1086
% Entering University	7.6	20.4	9.0	12.0	15.0	17.0	20.0	24.0	28.0	32.0
Number going on to University	25	76	40	66	95	128	158	217	276	347

Source: Ministry of Education, Annual Yearbook, 1980/71 and 1971/72 (Arabic).

TABLE 5.28. AVERAGE PERFORMANCE RATES FROM 1970/71 TO 1972/73,
FOR EACH STAGE OF UNIVERSITY SCIENCE FOR KUWAITI MEN:

	<u>% Passed:</u>
Stage 1	56
Stage 2	85
Stage 3	95
Stage 4	90

Source: Kuwait University, Student's Statistics 1970/71 and 1972/73,

TABLE 5.29. PROJECTED PERFORMANCE RATES FROM 1972/73 TO 1979/80 FOR KUWAITI MEN IN UNIVERSITY SCIENCE, FOR EACH STAGE.

	<u>1972/73</u>	<u>1973/74</u>	<u>1974/75</u>	<u>1975/76</u>	<u>1976/77</u>	<u>1977/78</u>	<u>1978/79</u>	<u>1979/80</u>
1st Stage (%)	60	65	70	75	76	77	78	79
2nd Stage (%)	.85							
3rd Stage (%)	.95							
4th Stage (%)	.9							

TABLE 5.30 DISPOSITION OF KUWAITI MALE STUDENTS IN UNIVERSITY SCIENCE, 1970/71 TO 1979/80:

	<u>1970/71</u>	<u>1971/72</u>	<u>1972/73</u>	<u>1973/74</u>	<u>1974/75</u>	<u>1975/76</u>	<u>1976/77</u>	<u>1977/78</u>	<u>1978/79</u>	<u>1979/80</u>
Stage 1:										
Total Enrolment	25	76	40	66	95	128	158	217	276	347
Pass	14	36	24	42	66	120	167	215	274	
Fail	11	40	16	24	29	32	38	50	61	73
Stage 2:										
Total Enrolment	15	14	36	24	42	66	96	120	167	215
Pass	9	13	30	20	35	56	81	102	141	182
Fail	6	1	6	4	7	10	14	18	26	33
Stage 3:										
Total Enrolment	10	9	13	30	20	35	56	81	102	141
Pass	9	9	12	28	19	33	53	76	96	133
Fail	1	-	1	2	1	2	3	5	6	8
Stage 4:										
Total Enrolment	10	9	10	12	28	19	33	53	76	96
Pass	9	9	9	10	25	17	29	47	68	86
Fail	1	-	1	3	3	2	4	6	8	10

Note: 1970/71 to 1972/73: Actual figures.
1972/73 to 1979/80: Projected figures.

TABLE 5.31. NUMBER OF STUDENTS ENTERING UNIVERSITY ARTS FACULTIES AND DISPOSITION IN ALL STAGES
FROM 1970/71 TO 1979/80

	<u>1970/71</u>	<u>1971/72</u>	<u>1972/73</u>	<u>1973/74</u>	<u>1974/75</u>	<u>1975/76</u>	<u>1976/77</u>	<u>1977/78</u>	<u>1978/79</u>	<u>1979/80</u>
No. of Secondary Graduates	211	246	321	396	434	450	518	563	619	648
No. who do not proceed to 1st stage of University	11	84	41	196	219	220	268	298	339	358
1st Stage:										
Total Enrolment	162	200	162	180	200	215	330	250	265	280
Pass (80%)	126	181	129	144	160	172	264	200	212	224
Fail (20%)	36	19	33	36	40	43	66	50	53	56
2nd Stage:										
Total Enrolment	135	126	181	129	144	160	172	264	200	212
Pass (95%)	135	119	171	122	136	152	163	250	190	201
Fail (5%)	-	7	10	7	7	8	9	14	10	11
3rd Stage:										
Total Enrolment	115	135	119	171	122	136	152	163	250	190
Pass (95%)	115	106	113	162	115	129	144	154	237	180
Fail (5%)	-	29	6	9	7	7	8	9	13	10
4th Stage:										
Total Enrolment	108	115	106	113	162	115	129	144	154	237
Pass (95%)	102	109	100	107	153	109	122	132	146	225
Fail (5%)	6	6	6	6	9	6	7	8	8	12

Note: 1970/71 to 1972/73: Actual figures.
 1973/74 to 1979/80: Projected figures.

TABLE 5.32. DISPOSITION OF STUDENTS NOT ENTERING UNIVERSITY AND ENTERING TEACHER TRAINING, 1970/71 TO 1979/80.

	<u>1970/71</u>	<u>1971/72</u>	<u>1972/73</u>	<u>1973/74</u>	<u>1974/75</u>	<u>1975/76</u>	<u>1976/77</u>	<u>1977/78</u>	<u>1978/79</u>	<u>1979/80</u>
Secondary school graduates not entering University	396	410	600	618	722	759	815	963	1044	1040
<u>Teacher Training:</u>										
Stage 1: Total Enrolment	-	-	70	170	170	140	120	120	120	120
Drop Outs (10)			7	17	17	14	12	12	12	12
Stage 2: Total Enrolment										
Pass				63	157	136	136	112	96	96
Drop Outs				6	17	14	12	12	12	12
Annual Drop Outs			7	23	34	28	24	24	24	24

Source: Figures taken from a Planning Document, published by the Research Control and Technical Co-ordination Department,
Ministry of Education.

TABLE 5.11. SUMMARY OF MALE FEMALE ENTRANTS TO THE LABOR FORCE, AND 14 AND OVER,
1971/72 TO 1979/80

Educational Attainment	70/71	71/72	72/73	73/74	74/75	75/76	76/77	77/78	78/79	79/80
Never entered school	421	478	495	552	609	665	721	778	834	940
Sub-total: Less than Primary completions: 0	421	478	495	552	609	665	721	778	834	940
Primary Completers:										
N.E. Int.										
Drop Out Intermediate 1	143	163	183	206	218	240	261	240	246	256
Drop Out Intermediate 2	114	155	166	176	184	195	217	207	209	217
Drop Out Intermediate 3	193	227	245	265	289	303	334	327	328	338
Drop Out Intermediate 4	134	169	184	194	211	219	245	246	248	253
Sub-total: Primary, but less than Intermediate Completion (C-1):	614	714	778	841	902	957	1057	1020	1031	1064
Drop Out. Sec.Gen.1	124	109	136	150	182	192	213	217	219	223
Sec. Commer.1.	4	5	6	6	7	7	8	8	8	8
Sec. Tech.1.	50	205	102	62	140	145	161	163	163	167
Sec. Gen.2.	106	147	160	198	200	235	253	279	288	290
Sec. Com.2.	3	3	5	6	6	6	6	7	7	7
Sec. Tech.2.	12	13	8	9	6	13	14	15	15	16
Sec. Arts 3.	3	3	4	5	6	6	7	8	9	9
Science 3.	36	42	54	61	73	75	87	94	104	107
Commerce 3.	1	1	2	2	3	3	3	3	4	4
Tech. 3.	5	6	5	4	4	4	5	6	6	6
Arts 4.	44	46	54	71	88	96	100	115	125	137
Science 4.	25	35	42	52	61	72	75	86	94	104
Com. 4.	1	1	1	1	1	2	2	2	2	2
Tech. 4.	4	4	-	3	2	-	2	3	3	3
Secondary Technical School Completers:	131	142	153	227	156	155	103	237	246	275
Sub-total: Intermediate School and Technical school completers, but less than Secondary Commercial or General Secondary (C-2):	649	762	731	857	935	1015	1039	1243	1293	1358
Age: Educational Attainment:										
6+ Never entered school	421	478	495	552	609	665	721	778	834	940
6+ Dropped Primary 1										
7+ Dropped Primary 2										
8+ Dropped Primary 3										
9+ Dropped Primary 4										
Sub-total: Less than Primary completion	421	478	495	552	609	665	721	778	834	940
9+ Primary completers, N.E. Int.										
10+ Dropped Inter. 1.	143	163	183	206	218	240	261	240	246	256
11+ Dropped Inter. 2.	114	155	166	176	184	195	217	207	209	217
12+ Dropped Inter. 3.	193	227	245	265	289	303	334	327	328	338
13+ Dropped Inter. 4.	134	169	184	194	211	219	245	246	248	253
Sub-total: Primary, but less than Intermediate Completion:	614	714	778	841	902	957	1057	1020	1031	1064
14+ Drop Outs Sec.Gen.1.	124	109	136	150	182	192	213	217	219	223
14+ Drop Outs Sec.Com.1.	4	5	6	6	7	7	8	8	8	8
14+ Drop Outs Sec.Tech.1.	150	205	102	62	140	145	161	163	163	167
15+ Sec.Gen.2.	106	147	160	198	200	236	253	279	288	290
15+ Sec.Com.2.	3	3	5	6	6	6	6	7	7	7
15+ Sec. Sec.Tech.2.	12	13	8	9	6	13	14	15	15	16
16+ Sec. Sec.Arts.3.	3	3	4	5	6	6	7	8	9	9
16+ Science 3	36	42	54	61	73	75	87	94	104	107
16+ Com.3.	1	1	2	2	3	3	3	3	4	4
16+ Tech.3.	5	6	5	4	4	4	5	6	6	6
17+ Arts 4.	44	46	54	71	88	96	100	115	125	137
17+ Science 4	25	35	42	52	61	72	75	86	94	104
17+ Com.4.	1	1	1	1	1	2	2	2	2	2
17+ Tech.4.	4	4	-	3	2	2	2	3	3	3
Sub-total, Intermediate, but less than Secondary Technical School Completion:	518	619	577	630	779	860	736	1006	1047	1683
Secondary Technical School Completers:	131	142	153	227	156	155	103	237	246	275
Sub-total: Intermediate School and Secondary Tech.School completers, but less than Secondary Commercial or the General Secondary (C-2):	649	762	731	857	935	1015	1039	1243	1293	1358
Age: Educational Attainment	70/71	71/72	72/73	73/74	74/75	75/76	76/77	77/78	78/79	79/80
17+ Secondary Commercial School Completers	20	39	55	109	116	122	134	139	155	156
18+ Secondary General School Completers, not entering further education	396	410	600	618	722	759	815	963	1044	1040
18+ Drop outs of Teacher Trainings: 1st Stage			7	17	17	17	14	12	12	124
18+ Drop outs of Univer. Arts: 1st Stage	36	19	33	36	40	43	66	50	53	56
18+ Drop outs of Univer. Science: 1st Stage	11	40	16	24	29	32	38	50	61	73
C-1: Sub-total: Secondary Completers	463	508	711	804	924	973	1067	1214	1325	1449
19+ Drop outs of Teacher Trainings: 2nd Stage	-	-	-	6	17	14	12	12	12	12
19+ Drop outs Univ.Arts. 2nd Stage	-	7	10	7	7	8	9	14	10	11
19+ Drop outs Univ.Science. 2nd Stage	6	1	6	6	7	10	14	18	26	33
19+ Graduates of the Teacher Training Colleges	-	-	-	-	57	136	136	112	56	96
20+ Drop outs from Univ. Arts: 3rd Stage	-	29	6	9	7	7	8	9	13	10
20+ Drop Outs from Univ. Science: 3rd Stage	1	-	1	2	1	2	3	5	6	8
21+ Drop Outs from Univ. Arts: 4th Stage	6	6	6	6	9	6	7	8	8	12
21+ Drop Outs from Univ. Science: 4th Stage	1	-	1	3	3	2	4	6	8	10
B. Sub-total. One to three years Secondary Completion	14	43	30	39	108	185	193	184	179	192
21+ University Science Graduates	10	9	9	9	10	25	17	29	47	68
Post-Graduate Science					130					130
Sub-total A-1: University Arts Graduates	10	9	9	9	140	25	17	29	47	198
Sub-total. A-2:	102	109	109	107	153	109	122	136	144	225
	102	107	100	107	153	107	122	136	144	225

TABLE 5.34. NUMBER OF OCCUPIED KUWAITI WOMEN IN 1970, PROJECTED TO 1980.

Age Cohort	<u>Population</u> <u>1970</u>	<u>Number</u> <u>Occupied</u>	<u>Partici-</u> <u>pation</u> <u>rate</u>	<u>Population</u> <u>1975</u>	<u>Partici-</u> <u>pation</u> <u>rate</u>	<u>Number</u> <u>Occupied</u>	<u>Population</u> <u>1980</u>	<u>Partici-</u> <u>pation</u> <u>rate</u>	<u>Number</u> <u>Occupied</u>
12-24		19				2			
15-19	18275	222	1.2	21924	1.1	241	29505	1.0	295
20-24	14442	788	5.5	18117	8.0	1449	21735	12.0	2608
25-29	13466	427	3.1	14291	4.6	657	17928	6.6	1183
30-34	8868	150	1.7	13309	1.9	253	14125	2.1	297
35-39	7818	114	1.4	8750	1.4	121	13133	1.4	184
40-44	5026	91	1.8	7610	1.9	145	8517	2.0	170
45-49	4204	68	1.6	4862	1.7	83	7361	1.8	132
50-54	4310	72	1.7	4025	1.9	76	4652	2.1	98
55-59	2033	29	1.4	4062	1.6	64	3793	1.8	68
60-64	2730	42	1.5	1859	1.6	30	3715	1.7	63
64+	5019	31	0.6	5427	0.3	19	5136	0.3	19
Total	86191	2053		103546		3165			5117
Crude Partici-	2.3%			3.0%			3.9%		
pation rate:									

Source: Table 3.18.

TABLE 5.35. THE EDUCATIONAL ATTAINMENT OF KUWAITI WOMEN AND THOSE OCCUPIED, BY AGE COHORT IN 1970.

Age Cohort	Illiterate	Read Only	Read & Write	Primary Cert	Intermediate Cert	Secondary Cert	Post Sec. Cert	University Graduate	Post-Graduate	n.s.	Total	Number Occupied
10-14	4926	71	5795	10320	798					45	22055	19
15-19	22.3	.32	26.2	46.7	3.6	613				13	18275	222
20-24	7782	70	1270	3909	4618	3.3				18	1142	788
25-29	42.5	.38	6.9	21.3	25.2	1185	121	116	2	.1	13466	427
30-34	8882	108	1590	1295	1225	8.2	.1	108	6	12	8868	150
35-39	61.5	.74	11.0	8.9	8.4	299	.1	.8	1	5	7818	91
40-44	10358	138	1491	628	404	2.2	6	27	1	6	5026	68
45-49	76.9	1.0	11.0	4.6	3.0	96	-	.3		4	4204	72
50-54	7308	164	871	242	147	1.0	0	8		3	4310	29
55-59	82.4	1.8	9.8	2.7	1.6	144	2	.1		5	2730	42
60-64	6717	184	674	119	64	.5						
Source:	85.9	2.3	8.6	1.5	.8	17						
	4492	131	328	34	16	.3						
	89.3	2.6	6.5	.6	.3	11						
	3812	130	231	9	6							
	4136	72	87	5	2	3						
	1919	56	49	4	1	1						
	2635	51	37	1	1							

Planning Board, Census 1970, Kuwait, Table 7 (Arabic).

TABLE 5.36. EDUCATIONAL ATTAINMENT OF OCCUPIED KUWAITI WOMEN, 1970.

Illiterate:	Literate:	Primary:	Intermediate:	Secondary:	Post-Secondary:	University:	Total:
473	134	186	286	694	29	220	2022

Source: Planning Board, Census 1970, Kuwait, Table 16.

TABLE 5.37. KUWAITI GIRLS ENTERING THE LABOUR FORCE
BY EDUCATIONAL ATTAINMENT, 1970-75, 1980-85.

<u>Educational Attainment</u>	<u>1970-1975.</u>	<u>1980-1985.</u>
University Science Degree	-	-
University Arts Degree	571	738
One to three years post-secondary education	57	672
Secondary completion	438	542
Intermediate, but less than secondary completion	-	-
Primary, but less than intermediate completion	-	-
Less than primary completion	-	-
Total	1,112	1,952.

Source: Table 5.34, and see text.

TABLE 5.38. KUWAITI BOYS ENTERING THE LABOUR FORCE
BY EDUCATIONAL ATTAINMENT, 1970-75, 1975-80.

<u>Educational Attainment</u>	<u>1970-1975.</u>	<u>1975-1980.</u>
University Science Degree	177	316
University Arts Degree	571	738
One to three years post-secondary completion	234	933
Secondary completion	3,410	6,028
Intermediate, but less than secondary completion	3,934	5,948
Primary, but less than intermediate completion	3,849	5,129
Less than Primary completion	2,555	3,938
Total	14,730	23,030

Source: Calculated from Table 5.33.

TABLE 5.39. KUWAITIS ENTERING THE LABOUR FORCE, 1970-1975, 1975-1980:

<u>Educational Attainment</u>	<u>1970-1975</u>	<u>1975-1980</u>
University Science Degree	177	316
University Arts Degree	1,142	1,476
One to three years post-secondary education	291	1,605
Secondary completion	3,894	6,570
Intermediate, but less than secondary completion	3,934	5,948
Primary, but less than Intermediate completion	3,849	5,129
Less than Primary completion	2,555	3,938

Total:

Source: Compiled from Tables 5.37 and 5.38..

TABLE 5.40 SUMMARY OF THE DEMAND FOR AND THE SUPPLY OF LABOUR IN KUWAIT, ASSUMING ECONOMIC GROWTH, 1970-1975, 1975-1980.

Column (1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Occupational Groups	Total Employ- ment, 1970	Non- Kuwaitis, 1970	New Jobs, 1970-75	Kuwaiti wastage, 1970-75	Total Job Opportun- ities, 1970-75	Kuwaiti Supply: 1970-75	Shortage(-) or Surplus(+)	New Jobs 1975-80	Kuwaiti wastage 1975-80	Non- Kuwaitis in 1975 1975-80	Total Job Opportun- ities 1975-80	Kuwaiti Supply, 1975-80	Shortage(-) or Surplus(+)
Professional and Scientific Occupations, usually requiring a Science/Maths Based University Degree (A-1):	3978	3764	409	50	4223	177	- 4066	1314	72	4066	5432	315	- 5116
Professional Occupa- tions, usually requiring an Arts based University Degree (A-2):	10352	7560	1688	190	9438	1142	- 8296	2453	275	8296	11024	1476	- 9549
Sub-Professional Occupa- tions and technical occupations, usually requiring one to three years post-secondary education (B):	20544	15897	2724	44	18665	291	- 18374	6089	729	18374	25190	1605	- 23585
Skilled office occupa- tions, usually requiring secondary completion (C-1):	33828	20268	4370	535	25173	3894	- 21279	6101	895	21279	28275	6570	- 21705
Skilled manual occupa- tions, requiring Vocational and/or Training related classroom instruc- tion (C-2):	40119	28916	3440	416	32772	3934	- 28838	14929	540	28838	44307	5948	- 38359
Semi-skilled manual occupations, usually requiring literacy plus on-the-job training (C-3):	39266	33945	3689	587	38221	3849	- 34372	10896	834	34372	46102	5129	- 40973
Unskilled manual occupations, not requiring special education or training: (D):	86177	64372	12503	1307	78182	2555	- 75627	24534	1821	75627	101982	3938	- 98044
Total:	234264	174720											

Source: Compiled from Tables 5.12, 5.13, 5.39.

CHAPTER 6.THE DEVELOPMENT OF HUMAN RESOURCES.PREFACE

In Chapter Four, economic development and the labour market of each of our three countries was considered. From that chapter, we gained an insight into the current and likely future economic development, and the structure and working of the labour market. In Chapter Five, we assessed numerically the demand for, and supply of, labour in Kuwait from 1970 to 1980. We have therefore a considerable amount of information useful to making an assessment of the development of human resources. In this chapter we make that assessment. Our enquiry proceeds at two levels; first, we examine the disposition of educational resources to see if their allocation is consistent with those aims which educationalists have stated explicitly; second, we assess the development of human resources against the aim of providing appropriately trained graduates for the needs of the economy. It is particularly in this second level that the information gleaned on the working of the labour market becomes useful. The allocation of educational resources may turn out to be inappropriate, but that may be because of external factors over which educationalists have no control, such as the rewards for different skills found in the labour market.

Each Part of the Chapter deals with one of our three countries, and is organised similarly. Initially the aims of the educational system and training institutions are defined, then the way they work in practice is considered, and finally an evaluation is made of the investment in human resources, taking into account both the stated aims and the need to produce useful graduates for the particular needs of the economy.

PART IKUWAIT.Introduction.

Kuwait's educational planners have established aims for the education and training sector which appear to be complementary to the needs which Kuwait has for her economic development. However, close inspection of Kuwait's educational system and training institutions shows that she neither accomplishes her own stated aims, nor produces an appropriate blend of manpower for the needs of the economy. Some of the failings of the educational sector have solely educational causes, but the majority do not. The effect of relative pay rates of Kuwaitis in government employment is to create a divergence between the social rate of return for certain types of training, and the private rates of return. This divergence renders ineffective much of the efforts of Kuwait's educationalists and Kuwait's investment in human resources.

6.1. The aims of the educational system and training institutions.

From a survey of statements on education by the government, Ministry pamphlets and occasional papers released by the institutions themselves, a variety of aims can be discerned. A summary of those more pertinent to this study is given here.

- a) Education up to the end of the "Intermediate" level is both free and compulsory for Kuwaitis. This reflects an educational aim that all Kuwaiti children shall experience sufficient education to be, at least, literate.¹
- b) In order to equip Kuwaitis to be good citizens, and to act responsibly in adult life, a high standard of education is required in schools.²
- c) While it is hoped that Kuwaitis will participate in all sectors of the economy, there is a particular concern that Kuwait will become self-sufficient in teachers in the foreseeable future.³
- d) In view of the envisaged industrial expansion in Kuwait, pupils must be trained to enter the industrial sector. In particular, students should be encouraged to study technical subjects, to read science in the secondary level, and to study for a science based degree at University.⁴
- e) The training and education of Kuwaitis must be the most appropriate for the needs of the economy. It is thought that a "technical" or "scientific" training will provide the most useful type of graduate.⁵

Two types of aims are discernible in this list; there are the purely "educational" aims and there are those which concern the relationship of the educational sector with the economy. We are more concerned with the latter category but both will be examined, as unless the educational system is efficient in accomplishing purely educational aims, it is hardly likely to fulfill more ambitious ones. At times the distinction between each type of aim becomes slight.

6.2. The operation of the educational system and training institutions.

Before 1912, education was limited to Koranic instruction in "Kuttab" schools.⁶ These schools were designed to acquaint the pupil with the Koran, and hence the religious customs of the community. The schools were exclusively for boys, and instruction was limited to reading, copying and learning parts of the Koran.

In 1912 a school was commissioned by the mercantile community and built in the city of Kuwait. The purpose of the school was to train clerks and accountants and to assist the merchants in their commercial enterprises. With the demise of the pearling industry in the 1920's,⁷ financial support for the school collapsed and it was closed. In 1936, after the discovery of oil, a Board of Education was instituted, and educational records date from that time. By 1937 four Primary schools were in existence, and 600 boys were enrolled. The following year the first girls' schools in Kuwait were opened, and 140 girls studied in them.⁸

It was not until after the Second World War that the oil reserves could be exploited,⁹ and in the years following Kuwait's educational system developed very rapidly. In 1952 an Intermediate level of four years was added to the four year Primary level, and by 1958 a Secondary level was in existence. Kuwait has always had a very liberal educational policy, and has attempted to provide free education for all citizens, as well as school meals and transport. By 1975 total enrolment had reached 184,099, divided between Primary: 44.7%; Intermediate: 29.6%; Secondary: 14.2%; and University: 2.0%.¹⁰ The remainder (11.5%) is accounted for by other schools - kindergartens, religious schools and teacher training institutions.

Education is compulsory to the end of the Intermediate stage, and this ensures eight years of education. At that point a selective exam

takes place, and students divide between "Technical", "Commercial" and "General" Secondary. It is possible to proceed to University only from the "General" Secondary and "Commercial" schools. A 55% pass is required in the final year examination of the "General" Secondary level,¹¹ and a higher pass is required from the "Commercial" school.

Kuwait University opened in 1966 and by 1973/74, 3,800 students were enrolled. Courses are offered in Pure Science, Social Science, Law and Shari'a, Arts and Education.¹² The educational alternative for graduates of "General" Secondary to the University, is teacher training, but almost all students who qualify for a University place accept one.

Examinations take place at the end of every academic year, usually in June. For those who fail in June a second attempt is permitted in September. Up to the end of the secondary stage, examinations are designed to assess progress, rather than to select. It is surprising that as many students "fail" as the statistics record. Students who "fail" may either "drop out", or repeat the year. In the Intermediate and Secondary levels there is the option of applying to a Vocational Training Centre.

The "General" secondary option is by far the most popular option of the three alternatives at that level. Almost certainly this is because it is the easiest stream from which to enter the University. At the end of the Secondary stage, students who do not achieve 55% in the terminal examinations are able to train as teachers. However, the majority who cannot obtain a University place are thought to leave the academic system and enter the Civil Service. Kuwaiti girls are an exception to this, as they tend to pursue every opportunity of further study and training which is open to them. ^

The system is rather an inflexible one, and much the greatest emphasis is given to general academic studies. The structure of educ-

ation is similar to that found in Egypt, and secondary school graduates with sufficiently good passes are accepted in Egyptian universities. Kuwait relies very considerably on Egyptian assistance for administrative staff and for teachers.

The curriculum is orientated to an Islamic view of society, and "religion" and "arabic language" absorb a substantial proportion of class time. There are special religious schools for a minority who wish to become "religious men" or "mullahs". These extend from the Primary to the Secondary level.

There is a very large non-Kuwaiti presence amongst pupils, teachers and administrators of education in Kuwait. Of the total enrolment in 1974/75 of 184,099, 36% were non-Kuwaiti children.¹³

The administration and maintenance of Kuwait's schools and colleges involves a small army of people; by 1973 the total number of persons employed by the Ministry of Education was 22,680.¹⁴ This represents 25% of all governmental employees and the Ministry of Education, not surprisingly, is the largest of all the Ministries; in 1972 the budget was K.D. 47m.¹⁵

The various levels of the educational system, the development of total enrolment, performance of students in examinations, and the composition of each level by nationality, will now be considered. Particular attention will be paid to Kuwaiti boys, since these constitute the major share of the future Kuwaiti workforce.

a) The Primary Level.

The Primary level lasts for four years, and all Kuwaiti children between the ages of six and ten should be in school. However, in 1972 about 14% of all Kuwaiti six-year old boys did not enrol in school, as Table 4.1 shows. It is thought that the comparative figure for Kuwaiti girls is more than this, as parents in Gulf States are often reluctant

to send daughters out from the home to school. The 1,000 or so Kuwaiti boys shown as not in school in 1972 are thought to be the children of the Bedouin community; this nomadic community has not fully integrated into Kuwaiti society, and the benefits which education may confer are not yet clear to them. In recent years the Bedouins have begun to settle in the south of Kuwait, and it is thought that the "enrolment ratio" in Kuwait will rise in the coming years.

Total enrolment in the Primary level has "exploded" twice. First in 1960 and 1960, and again in 1971 and 1972. Table 6.37 of the Appendix shows the development of the earlier explosion in demand through the system. Table 6.2 shows the rapid increase in total enrolment which occurred from 1971 onwards.

TABLE 6.1. KUWAITI BOYS AGED SIX IN SCHOOL AND NOT IN SCHOOL.

<u>Year</u>	<u>Kuwaiti boys aged six.¹</u>	<u>Number entering school.²</u>	<u>Enrolment Ratio.</u>	<u>Number not entering school.</u>
1965	4241	3695	.87	552
1966	4681	4072	.87	609
1967	5116	4451	.87	665
1968	5550	4829	.87	721
1969	5985	5206	.87	778
1970	6395	5561	.87	834
1971	6651	5711	.86	940
1972	6673	5663	.85	1010

Source: (1) 1965 Census, and 1970 Census, Kuwait (Arabic).
(2) Ministry of Education, Annual Reports, 1965-1972 (Arabic).

TABLE 6.2. TOTAL ENROLMENT BY NATIONALITY IN PRIMARY STAGE,
(1970/71 TO 1974/75).

<u>Academic Year.</u>	<u>Total Number Enrolled.</u>	<u>Kuwaiti Number.</u>	<u>%</u>	<u>Non-Kuwaiti Number</u>	<u>%</u>
1971/72	56,834	40,352	71	16,482	29
1971/72	63,351	43,078	68	20,273	32
1972/73	70,240	43,999	63	26,241	37
1973/74	75,499	44,544	59	30,954	41
1974/75	83,917	46,566	55	37,351	45

Source: 1970/71 to 1972/73: Ministry of Education, Annual Reports, 1970/71, 1972/73: General Statistics Section (Arabic).
1973/74 and 1974/75, Ministry of Education, Statistics of Nationalisation of Students, Research Control and Technical Coordination Department, Table 1.

The origin of the increase in total enrolment in 1960 and 1961 was the result of an expansion of education facilities which enabled all Kuwaiti children to go to Primary school. The latter explosion in demand has a different origin. Table 6.2 shows the share of non-Kuwaiti children to be 29% in the Primary level in 1970/71, and this share had been consistent over the previous seven years. However, between 1970/71 and 1974/75, the number of non-Kuwaitis increased from 16,482 to 37,351, and their overall share rose from 29% to 45% of the total. The increase in enrolment in this period was largely due to non-Kuwaiti school children more than doubling their numbers; presumably many of these children either came to Kuwait around 1967 or were born after 1967 in Kuwait. In Chapter 3 we noted the rapid increase, and the changing character, of the non-Kuwaiti population from that time.

The performance of students in the annual examination varies between each sex and nationality. Table 6.38 of the Appendix shows that in general 85% of all students pass their exams, and 15% repeat the year. Table 6.3 shows the annual pass rate in the terminal exam for each type of pupil from 1967/68 to 1971/72. Non-Kuwaiti boys do best, with a 90.5% pass rate, then non-Kuwaiti girls with 80.3%; next Kuwaiti girls with 82.3% and finally, Kuwaiti boys with a pass rate of 79.5%.

TABLE 6.3. RESULTS OF THE PRIMARY CERTIFICATE EXAMINATIONS BY SEX AND NATIONALITY FOR THE YEARS 1967/68 TO 1971/72.

	<u>KUWAITI</u>					
	<u>Sat</u>	<u>MALES Passed</u>	<u>%</u>	<u>Sat</u>	<u>FEMALES Passed</u>	<u>%</u>
1967/68	4802	3888	81	3482	2874	83
1968/69	4831	4064	84	3746	3079	82
1969/70	4771	3497	73	3788	2942	78
1971/71	5601	4383	78	4458	3774	83
<u>Average Pass rate</u>			79.5			82.3
	<u>NON-KUWAITI</u>					
	<u>Sat</u>	<u>MALES Passed</u>	<u>%</u>	<u>Sat</u>	<u>FEMALES Passed</u>	<u>%</u>
1967/68	2454	2261	92	1745	1593	91
1968/69	2770	2544	92	1856	1695	91
1969/70	2666	2320	87	1805	1550	86
1970/71	2495	2277	91	1703	1574	93
1971/72	2379	2147	90	1581	1440	91
<u>Average Pass rate</u>			90.5			90.3

Source: Ministry of Education, Examination Results, 1967/68 to 1971/72
Research Control and Technical Coordination Dept. (Arabia)

With the exception of terminal exams in the fourth year of the Primary level, exams are designed to measure progress rather than to be a means of selection. It is surprising that so many students have to repeat years of study because examinations are failed. The pattern of performance in the terminal exams, which Table 6.3 shows, is repeated in the Intermediate and Secondary level. This has an effect on the share of non-Kuwaiti children over time, which we will consider more fully later.

The increases in enrolment which occurred throughout the 1960's, led to a certain amount of overcrowding in Primary schools. Class sizes were often as high as forty, and some Primary schools became very large.¹⁶ One school, Abarow Khitan, enrolled 1,567 pupils in 1968.¹⁷

b) The Intermediate Level.

The Intermediate level, like the Primary level, lasts for four years, and attendance is compulsory for Kuwaitis. Total enrolment rose from 16,067 pupils in 1963/64 to 53,386 pupils ten years later. The explosion in demand for places in Primary education which occurred in the very early 1960's worked its way through to the Intermediate level by 1964. Table 6.39 of the Appendix shows the rapid increase in total enrolment between 1963/64 and 1967/68. Between 1971/72 and 1974/75 there was a comparatively small rise in total enrolment, as Table 6.4 shows.

TABLE 6.4. TOTAL ENROLMENT IN THE INTERMEDIATE STAGE BY NATIONALITY, 1971/72 TO 1974/75.

<u>Year</u>	<u>Total Enrolment</u>	<u>Kuwaiti</u>	<u>%</u>	<u>Non-Kuwaiti</u>	<u>%</u>
1971/72	49,965	32,705	65.5	17,260	34.5
1972/73	52,399	35,046	66.9	17,353	33.1
1973/74	53,386	36,303	68.0	17,083	32.0
1974/75	56,010	39,470	70.5	16,540	29.5
<u>Source:</u>	1971/72 and 1972/73: Ministry of Education, <u>Annual Reports 1971/72 and 1972/73</u> , Kuwait (Arabic). 1973/74 and 1974/75: Ministry of Education, <u>Statistics of Nationalities of Students, 1973/74 and 1974/75</u> , Research Control and Technical Coordination Department, Kuwait (Arabic).				

The number of non-Kuwaitis has held relatively constant over the period covered by Table 6.4, but their share diminished from 34.5% to 29.5%.

The performance of pupils in examinations at this level is thought to be the least good of the three main levels. Table 6.40 of the Appendix shows that between 1963/64 and 1970/71, failure rates were very high in aggregate for all pupils; in 1970/71, 25.7% of all pupils failed their annual exams. Ministry of Education officials saw these high failure rates as the result of two factors. These were: first that the rapid expansion of enrolment in the mid-sixties resulted in large schools and classes, which may have affected educational efficiency.¹⁸ Second, in order to alleviate the shortage of teachers, secondary school teachers were given two years teacher training, and then permitted to teach in the Intermediate level,¹⁹ and the use of these teachers at this level led to a fall in teaching standards. The development of Teacher Training, and the ultimate closure of the "Colleges" which trained these graduates, is dealt with under "(e) - Teachers".

While there is certainly some truth in the views of Ministry of Education officials, it does provide only a little help with the task of explaining the very wide differences in the performances of the different types of students. Table 6.5 shows that Kuwaiti boys consistently perform worse in annual examinations than any other group. Non-Kuwaiti girls usually do better compared with any other group. In 1970/71 more than one third of Kuwaiti boys failed their annual examinations in this level.

To proceed from the Intermediate to the Secondary level requires the successful completion of the final stage examination in the Intermediate level. Kuwaiti students may choose to continue in school, or to leave and undertake vocational training. Also, a sufficiently good

TABLE 6.5. FAILURE RATES IN INTERMEDIATE LEVEL ANNUAL EXAMINATIONS, BY SEX AND NATIONALITY, 1968/69 TO 1970/71.

<u>Nationality and Sex.</u>	<u>1968/69</u>	<u>1969/70</u>	<u>1970/71.</u>
Kuwaiti men	26.8	31.5	34.1
Kuwaiti Women	20.9	23.4	24.8
Non-Kuwaiti Men	16.3	18.9	19.2
Non-Kuwaiti Women	14.0	12.8	15.3

Source: 1968/69. Abstracted from Ministry of Education, Annual Yearbook, 1968/69, p.17 (Arabic).

1969/70. Ibid., 1969/70, p.65.

1970/71. Ibid., 1970/71, p.37.

Note: 1968/69 was the first year in which details of this kind are available, and 1970/71 the last.

mark must be obtained in the final examination to enable the pupil to pass on to the type of secondary school in which he wishes to study. Table 6.6 shows that in 1970/71 roughly the same proportion of Kuwaiti and non-Kuwaiti girls passed on to the secondary level, about 78.5% of the fourth grade enrolment in the Intermediate level. A high proportion of non-Kuwaiti boys in the same year ascended to the secondary stage (89%), while only 52.6% of Kuwaiti boys did so.

TABLE 6.6. THE PERCENTAGE OF THOSE IN INTERMEDIATE GRADE 4 PROCEEDING TO SECONDARY GRADE 1, BY SEX AND NATIONALITY, 1968/69 TO 1970/71.

<u>Nationality and Sex.</u>	<u>1968/69.</u>	<u>1969/70.</u>	<u>1970/71.</u>
Kuwaiti Men	68	50.5	52.6
Kuwaiti Women	85	78	79
Non-Kuwaiti Men	85	91	89
Non-Kuwaiti Women	66	85	78

Source: Abstracted from: Ministry of Education, Annual Report 1968/69 1969/70, 1970/71. "General Statistics", (Arabic).

c) The Secondary Level.

This level divides between the "General", "Technical" and "Commercial" branches. The share of the total Secondary enrolment that each branch has accounted for over the past ten years, has altered recently to enlarge the share of the "General" branch, and to reduce "Technical and Secondary" from 9.4% in 1970/71 to 4.5% in 1973, as Table 6.7 shows.

TABLE 6.7. THE TOTAL NUMBER AND RELATIVE DISTRIBUTION OF BOYS
IN TYPES OF SECONDARY SCHOOLS IN 1970/71 AND 1974/75.

	<u>1970/71</u>		<u>1974/75</u>	
	<u>Total Number</u>	<u>%</u>	<u>Total Number</u>	<u>%</u>
"General" Secondary	8187	89.1	13692	92.0
"Commercial" Secondary	142	1.5	521	3.5
"Technical" Secondary	853	9.4	680	4.5

Source: Ministry of Education, General Statistics, 1970/71 and 1974/75,
Research Control and Technical Coordination Department (Arabic).

i) General Secondary.

By 1970 the increases in Primary school enrolment of 1960 and 1961 had reached the General Secondary stages, as Table 6.41 of the Appendix shows. Students in this level may choose in their third year between "Arts" and "Science" streams.

Ministry of Education officials have attempted to persuade Kuwaiti students to enter that stream, as it is thought that in the future science graduates will be more useful than arts graduates for Kuwait.²⁰ Their success in persuading Kuwaiti boys to co-operate is shown on Table 6.8.

TABLE 6.8. DISPOSITION OF THIRD YEAR KUWAITI MALE STUDENTS,
DIVIDED BY OPTION.

	<u>1968/69.</u>	<u>1969/70.</u>	<u>1970/71.</u>	<u>1971/72.</u>	<u>1972/73.</u>
<u>3rd Year Arts</u>					
Total Enrolment	288	288	352	400	497
Percentage	43	36	37	36	38
<u>3rd Year Science</u>					
Total Enrolment	387	516	613	700	798
Percentage	57	64	63	64	62

Sources: 1968/69: Ministry of Education, Annual Yearbook 1968/69, pp.76 & 77 (Arabic).

1969/70: Ibid., 1969/70, pp. 69-70.

1970/71: Ibid., 1970/71, pp. 41-42.

1971/72 and 1972/73, Ministry of Education, Educational Statistics,
Research Control and Technical Coordination Department (Arabic).

Table 6.9 shows the by now familiar pattern of pupil performance in examinations. The only slight modification to the pattern is that in the secondary level, Kuwaiti women do slightly better than non-Kuwaiti men in examinations.

In Table 6.42 of the Appendix the performance of each type of student in each stage of the secondary level shows that the performance rates in the "Arts" stream are slightly better for each type of student than they are in the "Science" stream.

TABLE 6.9. TOTAL ENROLMENT AND FAILURE RATE OF STUDENTS IN THE SECONDARY STAGE, BY SEX AND NATIONALITY, 1968/69 TO 1970/71.

	<u>1968/69</u>	<u>1969/70</u>	<u>1970/71</u>
<u>Kuwaiti Men</u>			
Total Enrolment	3390	4287	4808
Failed	717	857	931
Percentage	21.1	20.0	19.4
<u>Kuwaiti Women</u>			
Total Enrolment	2205	2974	3996
Failed	183	303	628
Percentage	8.3	10.1	15.7
<u>Non-Kuwaiti Men</u>			
Total Enrolment	3211	3841	3708
Failed	553	644	559
Percentage	16.6	17.3	15.1
<u>Non-Kuwaiti Women</u>			
Total Enrolment	1777	2214	2737
Failed	127	182	374
Percentage	7.1	8.2	13.6

Source: Ministry of Education, Annual Yearbook 1970/71, p.41 & 42 (Arabic).

Kuwaiti graduates from "General" secondary schools with a pass of 55% or more in the terminal examinations are permitted to pass on to Kuwait University. Non-Kuwaitis must have a minimum of 65% in the terminal exam, and their acceptance at the University depends to some extent on the availability of places.

ii) Technical Secondary.

The "Technical" branch of secondary education, unlike the "General" branch, is a terminal stage. Graduates cannot pass from there to the University.

After a diagnostic first year, students divide into two streams for the second, third and fourth years, namely "Craftsmen" and "Pre-technicians". More able students are assigned to the latter stream. Graduates of the craftsmen stream are intended to be equipped to enter the workforce in a skilled or semi-skilled manual occupation. "Pre-technician" graduates should require only a further period of training to qualify as technicians. Craftsmen may choose from four specialisations: Auto-mechanics, Refrigeration and Air-Conditioning, Wood-work and Instrumentation. The choice of specialism for "Pre-technicians" is one of five engineering fields: Chemical, Mechanical, Electrical, Electronics or Civil.²¹

Table 6.45 in the Appendix shows the development of enrolment in the Technical school from the time it began in 1954 up to 1967. Of more immediate relevance to our enquiry is the enrolment from 1970/71 to 1974/75, which Table 6.10 shows. Total enrolment over that period has fallen from 951 to 680 pupils. If the relatively large 1st grade enrolment in 1974/75 represents a reversal of the trend of enrolment, then total numbers may increase in future years.

A consideration of the progression of individual cohorts through the system in Table 6.10 will show that overall drop out rates must be very high. For example, 385 1st grade students in 1970/71 becomes 189 students in the second grade in 1971/72. 255 1st grade students in 1971/72 becomes 170 students in the 2nd grade in 1972/73. This implies a net drop out rate of about 34%. After the diagnostic first year the retention rate picks up considerably.

TABLE 6.10. ENROLMENT IN EACH STAGE OF THE TECHNICAL SCHOOL
1970/71 TO 1974/75.

	<u>1970/71.</u>	<u>1971/72.</u>	<u>1972/73.</u>	<u>1973/74.</u>	<u>1974/75.</u>
1st stage:	385	255	176	165	301
2nd stage: Craftsmen	252	102	94	91	133
Pre-technicians		87	76	85	
3rd stage: Craftsmen			82	93	111
Pre-technicians	168	240	80	80	
4th stage: Craftsmen					
Pre-technicians	146	153	230	186	135
Total	951	837	738	700	680

Source: 1970/72; Ministry of Education, Statistical Information,
21st March, 1973.
1972/73; Ministry of Education, Statistics of Students in the
Technical College, 1972-75 (Arabic).

Students in the technical schools receive stipends of K.D. 30 per month, and they are fined K.D. 150 for each day's absence.²²

The poor results of students in examinations has been described as being due to "the low calibre of the students, the lack of course discipline, the brevity of the academic year, the lack of facilities, and the inexperience of the teaching staff".²³ Moreover, the view of the staff of the Technical school is that graduates of the school were much less able than their paper qualifications might suggest.²⁴

iii) Commercial Secondary.

There is only one "Commercial" secondary school for boys in Kuwait, and it accounts for a small number of the total of all pupils in the secondary level - 3.5% in 1975. In 1974/75 the Commercial school enrolled 561 boys. As Table 6.7 shows, it has expanded rapidly since 1970/71, when total enrolment was only 142.

The performance of pupils in this school in examinations is very high. In every stage the pass rate is higher than 95%. It is possible to ascend to Kuwait University from the Commercial schools, but the stipulated pass rate in the final examination is higher than from the "General" secondary schools.

d) University.

Graduates of the "General" and "Commercial" secondary schools with sufficiently good passes in the final examinations may proceed to the University of Kuwait, which opened in 1966.

There are four options open to students: "Science", "Arts and Education", "Law and Shari'a", "Commerce, Economics and Political Science". Table 6.11 shows Kuwaiti distribution between these options in 1973/74. It is surprising that so few Kuwaiti boys take the Science option (16.5%) when the large number of students who choose to study science in secondary schools is considered.

TABLE 6.11. ENROLMENT OF KUWAITIS IN KUWAIT UNIVERSITY BY SPECIALISM AND SEX IN 1973/74.

	<u>Men</u>	<u>%</u>	<u>Women</u>	<u>%</u>	<u>Total</u>	<u>%</u>
Science	117	16.5	188	14.7	305	15.4
Arts & Education	157	22.2	670	52.6	827	41.8
Law and Shari'a	104	14.7	89	6.9	193	9.8
Commerce, Economics and Political Science	326	46.2	326	25.6	652	33.0
Total	705	35.6	1272	64.4	1977	100.0

Source: Kuwait University, Student Statistics, 1973/74.

Girls outnumber boys in the University by 2:1, and there are several reasons for this. First, Kuwaiti girls generally do better in school than Kuwaiti boys, and appear to be more motivated to study than boys. The alternatives to University are limited for girls, whereas they are plentiful for boys. Many more boys study abroad than girls, mostly because parents are unwilling to permit daughters to travel abroad. In 1969/70 there were 103 girls studying for degrees abroad, compared to 559 boys.

The performance of male Kuwaitis is better in the non-science subjects than in science subjects. In the first year science in 1972/73 the pass rate amongst Kuwaiti boys was 56%. Kuwaiti girls do better in examinations at every stage in each specialism at the University.

e) Teachers.

The very rapid increase in total school enrolment from 1960 onwards resulted in Kuwait using a large number of expatriate teachers for her schools. Most expatriate teachers come from Egypt, Jordan or Palestine, and all have Arabic as a mother tongue. The Ministry of Education has seen the replacement of expatriate staff with Kuwaiti nationals as an important objective; however, severe difficulties have been experienced in achieving this aim.

Teacher training was initially confined to only two "Teacher Training Institutes", one for each sex. Entry to these Institutes was conditional upon Kuwaiti citizenship and the Intermediate school certificate. The training prepared teachers for the Primary level, and lasted for four years. The course was roughly equivalent to secondary school, except that students specialised in one subject, and the curriculum included an introduction to teaching method.

To teach at a higher level than Primary, it was necessary to study abroad, usually in Cairo or Beirut. Table 6.44 of the Appendix shows the number and share of Kuwaitis teaching by Year and Stage, and indicates that few Kuwaitis taught above the Primary level before 1968. Increasing enrolment at each stage persuaded the Minister of Education to create training facilities for teachers at the Intermediate level, and in 1968 two "Colleges" were opened for this purpose. A Secondary Certificate was necessary for entry to the Colleges, which were confined nominally to Kuwaitis. The training period lasted for two years, and offered options in Arabic and Islamic Culture, General Subjects, English and Physical

Education.

At the time the College opened, the enrolment in the Institute rose to its highest level, as Table 6.12 shows. Teachers from the Institute raised the Kuwaiti share of the total in the Primary stage from 15.3% in 1966/67 to 59.7% in 1971/72, a period when total enrolment was increasing. The Kuwaiti share in the Intermediate stage increased rapidly in the later years of this period.

However, the teachers who graduated from the Institute and the Colleges were found to be professionally inadequate, being thought immature, with a poor grasp of the English language.²⁵ The criticisms that were made of these graduates are not surprising when their brief period of education and their relative youthfulness are considered. Moreover, the students who opt for teacher training are by no means the most able. One of the reasons for this is that students who achieve 55% or more in their final year examinations of the secondary stage have the opportunity of a University place. Almost all who qualify for a University place will accept it; those with less than 55% in the terminal examination may either leave the educational system, enter technical vocational training or enter a teacher training college. It is thought that teacher training is, for Kuwaiti boys, a second-best alternative, though the position for Kuwaiti girls is somewhat different.

In 1970 Teacher Training was reorganised in order to improve the teaching standards of new teachers,²⁶ who were to be trained in either of two ways. Graduates of the secondary schools who wished to become teachers were to be trained at the new "Teacher Training Institute", where a two-year training is given. They may, on graduation, teach in the Kindergarten or Primary level. Secondary school graduates with sufficiently good passes may alternatively enter the Education Department of the University; after four years and the successful completion of the

course, they are qualified to teach in the Intermediate level. Only graduates with second degrees or with some teacher training may teach in the Secondary level.

Table 6.12 shows that the decrease in numbers at the "Old" Teacher Training Institutes, and the Colleges since the decision eventually to close them was taken in 1970. However, it is clear that the future supply of teachers for the Primary level is not likely to produce many male Kuwaiti teachers for some time. Interestingly, Kuwaiti males training to be teachers are outnumbered here also by almost 2:1 by the Kuwaiti female trainees.

The decision taken to improve teaching standards has left Kuwait temporarily bereft of new Kuwaiti teachers. Table 6.45 (Appendix) shows that from 1973/74 to 1974/75 the Kuwaiti share of Primary school teachers fell slightly from 62% to 58%. If the total enrolments in the new Teacher Training Institute continue to rise, the falling shares in the Primary stage of Kuwaiti teachers should be reversed.

Intermediate level teachers are now required to train in the University Department of Education. Table 6.13 shows the number of Kuwaitis in that department by stage, in 1973/74. It is thought that many of the women shown here will eventually graduate and become teachers, but how many men will do so is uncertain. The opportunities in government service for Kuwaiti graduates with degrees are thought to be considerable, and a teaching career, which commences in the Intermediate stage, is possibly less attractive. In any event, Table 6.13 shows that very few Kuwaiti boys have enrolled in the Department of Education. Table 6.14 shows that not only are there already more Kuwaiti women teachers than men, but also that there are more Kuwaiti women in the Intermediate and Secondary levels than Kuwaiti men.

TABLE 6.12. TOTAL ENROLMENT IN TEACHER TRAINING INSTITUTES AND COLLEGES, BY YEAR,
1963/64 TO 1974/75, BY SEX AND NATIONALITY.

	1963/64.	1964/65.	1965/66.	1966/67.	1967/68.	1968/69.	1969/70.	1970/71.	1971/72.	1972/73.	1973/74.	1974/5
(1) The "old" Teacher Training Institute:												
Male: Kuwaiti	120	246	439	676	1092	966	763	500	271	118	35	
Non-Kuwaiti	-	416	25	49	42	35	6	47	49	53	56	
Female: Kuwaiti	120	135	216	419	1250	1333	1427	1091	651	348	58	
Non-Kuwaiti	34	24	-	-	-	1	-	4	-	-	-	
(2) The Teacher Training Colleges:												
Male: Kuwaiti						70	183	236	206	76		
Non-Kuwaiti						1	3	3	18	16		
Female: Kuwaiti						71	164	221	262	130		
Non-Kuwaiti							1	1	7	7		300.
The New Teacher Training Institutes:												
Male: Kuwaiti										69	223)	360
Non-Kuwaiti										-	4)	
Female: Kuwaiti										140	457)	630
Non-Kuwaiti										4	14)	

Notes: (1) In 1970/71 a decision was taken to close these Institutions.

(2) The Colleges also terminated new enrolment in 1970/71.

Source:- 1963/64 to 1973/74: Abstracted from: Ministry of Education, The Development and the number of Schools, Classes and Pupils.

1954/55 to 1973/74: Research Control and Technical Coordination, Statistical Office, June 1974 (Arabic).

1974/75: Abstracted from: Ministry of Education, General Statistics No.3, Research Control and Technical Co-ordination, Statistical Office, January 1975 (Arabic).

TABLE 6.13. KUWAITI STUDENTS AT KUWAIT UNIVERSITY IN THE
DEPARTMENT OF EDUCATION, BY STAGE AND SEX, 1973/74.

	<u>Stage 1.</u>	<u>Stage 2.</u>	<u>Stage 3.</u>	<u>Stage 4.</u>
Men	64	33	39	21
Women	<u>250</u>	<u>184</u>	<u>123</u>	<u>113</u>
Total	<u>314</u>	<u>217</u>	<u>162</u>	<u>134</u>

Source: Kuwait University, Technical Office, Statistics, Academic Year 1973/74.

TABLE 6.14. KUWAITI TEACHERS IN EACH LEVEL OF EDUCATION, BY SEX, 1973/74.

	<u>Men</u>	<u>Women</u>
Primary	1227	1423
Intermediate	443	590
Secondary	<u>84</u>	<u>209</u>
Total	<u>1754</u>	<u>2222</u>

Source: Ministry of Education, Educational Statistics 1973/74, Research Control and Technical Coordination Department (Arabic).

When the Ministry of Education decided to upgrade teacher training it was also recognised that those who had graduated from the old Teacher Training Institutes with only Intermediate Certificates required further training. Table 6.15 gives an idea of the numbers that required re-training, showing teachers' qualifications at the Primary level in 1970/71. Of those with "teaching" certificates, 99.7% of Kuwaitis have "Secondary" certificates. It is most likely that these teachers have only "Intermediate" certificates, or at least a good proportion of them, and on that basis, approximately 1,460 Kuwaiti teachers required further training in 1970/71.

TABLE 6.15. TEACHER QUALIFICATIONS BY NATIONALITY.

Teachers' Qualifications: Primary Level, 1970/71.

	<u>With Teaching Certificate.</u>							
	<u>Male</u>	<u>KUWAITI</u> <u>%</u>	<u>Female</u>	<u>%</u>	<u>Male</u>	<u>NON-KUWAITI</u> <u>%</u>	<u>Female</u>	<u>%</u>
Secondary School Certificates	840	99.9	650	99.5	358	99.1	177	77.3
2 Years higher education:	1	0.1	3	0.5	26	6.6	46	20.1
University or higher certificate	-	-	-	-	9	2.3	6	2.6
<u>Without Teaching Certificate.</u>								
Less than Secondary or Special Studies	13	28.9	3	6.4	-	-	-	-
Secondary Certificates	29	64.4	39	83	207	81.2	334	95.4
Two years' higher education	3	6.7	3	6.4	23	9.0	10	2.9
University or higher certificate	-	-	2	4.2	25	9.8	6	1.7

Source: Ministry of Education, Statistics of General and Educational Personnel in all Departments and Levels for Academic Year 1970/71,
Research Control and Technical Coordination Department, p.2. (Arabic).

f) Vocational Training.

Vocational education is widely based in Kuwait. Most Ministries provide vocational training for their particular requirements. The main Training Centre is run by the Ministry of Labour and Social Affairs.

Education is compulsory for Kuwaitis up to the end of the Intermediate level; however, many of them drop out and for them the only opportunity of further training or education is with a vocational training centre. Students who drop out of secondary often subsequently enrol in a training centre, as do some secondary school leavers with poor pass marks.

In recent years there has been an additional incentive for Primary and Intermediate school "drop outs" to enter vocational training. The government has stated that students who drop out before completing the

Intermediate stage will not automatically be given employment in the government; however, attendance at a Vocational Training Institute for the specified period of training will be regarded as the equivalent of the Intermediate School Certificate.²⁷ The numbers applying to many of these institutes have risen dramatically since this decision was taken.

In 1973 a Vocational Training Department was created, responsible to the Council of Ministers. Its task was to coordinate all the vocational training which the government provided. After 1975, all vocational training will be under the control of the Central Training Department.

The large majority of candidates in vocational training centres are Kuwaitis, but some "Gulf Nationals" are admitted. A wide variety of training is offered from the most rudimentary, in the Firefighting School, to technician level in the Telecommunications Institute. After completion of the training in a vocational training centre, almost all Kuwaitis will be appointed to a post in the Ministry for which they have trained, on the Civil Service Grade 5. This gives a salary of approximately K.D. 100-150 per month.

Table 6.45 of the Appendix gives details of all the Vocational Training Institutes in Kuwait. Most of them train only Kuwaiti boys and give courses lasting between six months and two years. The two largest, and possibly most important Vocational Training Institutions are the Shuwaikh Industrial Training Centre and the Post and Telecommunications Training Institutes. The operation of these two centres will be considered in some detail.

Shuwaikh Industrial Training Centre: In 1966, the Kuwaiti government, in conjunction with the United Nations, established a Pilot Centre for Vocational Training of adult workers.²⁸ As a result of the success of the Pilot Centre, the present centre was established in 1971. Training

is given at three levels: Craftsmen Accelerated Training (Basic Training): Upgrading; and Craft Instructor Training.²⁹ The majority of participants are engaged in Basic Training, the other two types cater for a relatively small group of artisans who have some work experience. The Basic Training Course requires a minimum of completion of the second year of the Intermediate level, and by September 1975 had trained 699 students in its four years of operation. Participants receive a six months' "induction" course in either mechanical or electrical crafts. This is followed either by one or two years' training, depending on the student's aptitude. There are nine courses from which students may choose, namely: Machine Shop Practice, General Fitters, Motor Vehicle Repair, Diesel and Heavy Equipment Maintenance, Sheet Metal, Welding, Radio and T.V., Air Conditioning and Refrigeration, Instrument Fitting. The alternative specialisms reflect the particular types of jobs found in Kuwait.

Although it is not possible to "fail" in the Basic Training, a number of students leave. In the preparatory course, 10.7% of students dropped out and in the Basic Training 8.2% dropped out between 1971 and 1973.³⁰ The six months preparatory course is designed to dissuade those who are not suited to manual occupations from continuing, and these drop out rates seem very moderate.

A dramatic increase in applications of students followed from 1973. For 150 places in Basic Training, the number of applicants rose from an average of 250 to 500 in 1973.³¹ This was coincidental with the government's decision not to guarantee government employment to persons who had neither obtained an intermediate Certificate nor attended a vocational training centre.

Telecommunications Training Centre: The Centre began in 1966 with United Nations Development Programme assistance under the Funds in Trust Scheme. The aim is to train technicians, assistant technicians and traffic specialists as well as other categories of staff required by the Telecommunications Administration in Kuwait.³² Although it is run by the Ministry of Post and Telecommunications, graduates will be used by all Ministries concerned with communications: principally, Foreign Affairs, Civil Aviation and Police. Entrants to the Technicians course require the Secondary Certificate and to the Assistant Technicians course, the Intermediate School Certificate. The courses last 24 and 12 months respectively. Subjects taught include basic science, and lead to a knowledge of "post", "telegrams", "radio and T.V.". As with the other Vocational Centres, English is taught and some work done here is a duplication of the Shuwaikh Industrial Training Centre. In August 1974, the enrolment was 275 for all courses (see Table 6.26 in the Appendix). The emolument paid to Kuwaitis is K.D. 80 on the Technician course, and K.D. 60 to those enrolled on the other courses.

The Telecommunications Training Centre is thought, by commentators in Kuwait, to be relatively successful in training its enrolees to the required level. It is especially interesting to note that there are 54 girls currently enrolled on the Traffic Course; some of the female graduates of the previous courses have taken up employment with the Ministry of Post and Telecommunications.

6.3. An Evaluation of the Investment in Human Resources.

a) Primary Enrolment.

Table 6.1 shows that in 1972 only 86% of all Kuwaiti boys aged six entered school. It was mentioned in connection with that table that most of these children who are not in school have Bedouin parents.

Kuwait, in the last five to ten years, has made intensive efforts to settle the large numbers of nomads which her borders encompass. To this end huge housing estates have been built in the south of Kuwait and made available to the Bedouin tribesmen. Ministry officials report however, that so far, nomadic habits have largely been retained, and the dwellings provided by the government constitute only a temporary residence.

There appears to be universal enrolment in schools of primary school aged children in more settled areas. The problem in the future seems more likely to be excessive overcrowding in Primary schools as Kuwait's school age population continues to expand rapidly.

b) Standard of Education.

Judging the standard of education in Kuwait is an almost impossible task, as it is in any country, since there are no absolute standards by which to measure "education". However, Kuwait has adopted a system of annual examinations, and the performance of her pupils in these examinations provides some comparison of standards between groups of pupils. Occasionally, the Ministry of Education engages in self-appraisal and these views may also be a guide to the standard of education.

The evidence from the performance rates of pupils in examinations is that of the four groups in schools in Kuwait, Kuwaiti boys and girls and non-Kuwaiti boys and girls, Kuwaiti boys do least well. Often, non-Kuwaiti girls obtain the highest percentage passing in a given level. This differentiation extends from the Primary to the University level. In schools.

where there is no basis for comparison with non-Kuwaitis, such as the Boys' Technical School, performance rates are often very low. The average age of Kuwaiti boys tends to be much higher than for non-Kuwaitis in the same levels, even though many more Kuwaiti boys drop out than non-Kuwaitis, which suggests that Kuwaiti boys repeat more years than any of their colleagues.

The Ministry of Education has openly expressed its dissatisfaction with the graduates of the Teacher Training Colleges, and consequently decided to close those Colleges in 1970.³³

There are many more Kuwaiti women in Kuwait university than men; even allowing for the number of men who are studying abroad, there are still more Kuwaiti women in Higher Education than Kuwaiti men. To a certain extent this is because there are many more non-educational opportunities available for eighteen year old boys compared to those available for girls. It is also a reflection of the smaller number of Kuwaiti men who qualify for a University place compared to the number of women.

The generally poorer performance of Kuwaitis in schools compared with non-Kuwaitis implies that the cause of the low level of educational attainment of the former group is not due to the quality of the teaching, or other educational factors such as overcrowded classrooms; it seems that Kuwaitis are less concerned to do well in school than non-Kuwaitis and also that Kuwaiti boys are even less concerned than their female colleagues about their performance in school.

c) Self Sufficiency in Teachers.

Table 6.12 clearly shows that while the Kuwaiti teachers' share of the Kindergarten and Primary stages has risen rapidly over the past ten years, the Kuwaiti share of the Intermediate and Secondary level is very small. Moreover, Tables 6.13 and 6.14 show that the future supply of

teachers is relatively limited, and particularly the supply of male teachers. There are at least two factors which will work to reduce the Kuwaiti share of all teachers: (a) the very rapid increase in the Primary stage enrolment which occurred between 1970/71 and 1974/75 will eventually reach the Intermediate and Secondary levels. Because of the low pupil/teacher ratio at these stages, the demand for teachers will be much greater than it might seem; (b) In Chapter Three, we noted that the population of Kuwait was expanding at a very rapid rate. We also noticed a changing pattern of Non-Kuwaiti residence, namely, many more Non-Kuwaitis were bringing their small children with them. These two factors will add considerably to the already large primary school population, and hence to teacher demand.

Rather than attempt to reach self sufficiency in all levels of teachers, Kuwait might attempt to reach a partial self sufficiency. She may wish to be self sufficient in her requirement of teachers for Kuwaiti children only. This approach has the advantage that if Kuwait cannot become entirely self sufficient in teachers, then at least she is ensuring that an appropriate blend of teachers is being prepared in case all the Non-Kuwaitis leave Kuwait with their children.

Table 6.16 shows Kuwait's position given an aim of partial self sufficiency in 1970/71 and 1974/75. It is evident that by 1974/75, Kuwait has more than enough Kuwaiti Primary teachers for Kuwaiti schoolchildren, but only 37% and 17% of her Intermediate and Secondary school requirement in teachers. Moreover, this table shows that a position of partial self sufficiency in Intermediate school women teachers will be reached shortly. It is also evident that Kuwaiti men are penetrating the secondary level very slowly. Their share of the requirement of Kuwaiti teachers fell by 5% over the period.

TABLE 6.16. THE PROPORTION OF THE TOTAL KUWAITI TEACHER REQUIREMENT REPRESENTED BY KUWAITI TEACHERS In 1970/71 AND 1974/75.

	<u>1970/71.</u>			<u>1974/75.</u>		
	<u>Men</u>	<u>Women</u>	<u>Total</u>	<u>Men</u>	<u>Women</u>	<u>Total</u>
Primary	72% (886)	68%	70%	88% (1227)	120%	102%
Intermediate	14% (166)	14%	14%	29% (443)	46%	37%
Secondary	15% (80)	26%	20%	10% (84)	23%	17%

Notes: (1) The total Kuwaiti teacher requirement is calculated by using a pupil/teacher ratio of 18:1, 14:1, 9:1 for Primary, Intermediate and Secondary respectively.

(2) Figures in brackets () quoted after a percentage are the absolute number represented by that percentage.

Source:- Compiled from: Ministry of Education, Annual Report, 1970/71 (Arabic), and Students and Teachers by Nationality in Each Stage, 1974/75. Department of Research Control and Technical Coordination, Statistical Office, Ministry of Education (Arabic).

If the Ministry of Education adopted a "partial self sufficiency" aim, then two policy decisions would follow logically. First, the use of women Primary teachers in boys schools, thereby releasing Kuwaiti male Primary school teachers for retraining and promotion to the Intermediate level; second, as there is an acute shortage of male Kuwaiti teachers in the Secondary level, more intensive efforts should be placed on adding to the stock of these teachers.

There are several reasons why the Ministry of Education is unlikely to achieve their aim of even "partial self sufficiency" in the near future. The supply of Kuwaiti boys wishing to undertake teacher training is very small, not through lack of training facilities but because they are unwilling to be trained. It is thought that this is because the conditions, pay and status of teachers are not as high as in the alternative employment which is open to either University graduates or, relative to their qualifications, secondary school leavers. The alternative employment opportunities for girls are much more limited, and for them, teaching is a sufficiently attractive profession to encourage them to enrol as trainee teachers in large numbers. Also, teaching is a socially acceptable occupation for women, and one to which they can return after having a

family. The rigid division of male teachers in boys schools and female teachers in girls schools could become a major constraint to achieving self sufficiency amongst teachers. Bahrain, as we shall see later, has already prepared plans to use women teachers in both types of schools.

d) The Preparation of Graduates for Kuwait's coming Industrial Expansion.

We can identify at least two distinct occupational groups which will be required in Kuwait's industrial (and economic) expansion. These are "skilled and semi-skilled manual workers" ("C-2" and "C-3") (blue collar workers), and "Technicians" ("B").

Kuwait's efforts to train "blue collar" workers are found in her vocational institutions, and the technical schools. In recent years, doubts have been raised increasingly over the suitability of these schools for training "blue collar" workers. Vocational schools are not only expensive, but also:

"vocational school teachers ought to be well trained teachers as well as having industrial experience, but such people are scarce in any country; the equipment of vocational schools is liable to be either outworked or so advanced as to have little relevance to the country in question; it is virtually impossible to stimulate the actual rhythm and discipline of factory work in the classroom; and most students regard vocational schools as second best opportunities and hence are reluctant to take their training seriously".³⁴

The financial cost of vocational or technical schools in Kuwait is a less serious disadvantage than it would be in a typical poor developing country. The cost in terms of teacher resources is a major disadvantage for Kuwait. Whether or not the equipment currently used is appropriate or the routine of the schools similar to the working day, it is not possible to say. However, we do know that pupils tend to regard the vocational and technical schools as "second best opportunities". Only those who "fail" or who "drop-out" of the Intermediate or Secondary level enrol in Vocational Schools. Only those with inadequate Intermediate School pass marks for "General" or "Commercial" Secondary enrol in the "Technical" School.

We can also add to the list of weaknesses that have been enumerated above of Vocational and Technical schools in general, that in Kuwait, "blue collar" workers do not have particularly good academic backgrounds. Most of them, and particularly non-Kuwaitis, are literate, but very few have a "Technical" secondary school background (see Table 6.58).

Without an extensive study of the operation of vocational and technical schools we can say little more about them, except that they may not be an ideal way of training people for "blue collar" jobs.

The group of occupations described as "Technicians" (B) includes such jobs as Surveyors, Laboratory Assistants, Computer Technicians, Technical Assistants. Kuwait has no "Higher Technical Institutes" below the University, and such persons can only be trained abroad, or in small numbers in some of the Ministries' Vocational Training Centres.

The principal thrust of the Ministry of Education's efforts to equip graduates for "Kuwait's coming industrial expansion" outside vocational and technical schools has been to encourage more students to read science in "General Secondary" and to read science at University. In the former objective they have been successful. Table 6.8 shows more Kuwaiti boys each year reading science. But very few of that group are found reading science in the University. Given the theoretical approach to science teaching prevalent in Kuwait, which involves very little practical application, and in the absence of a higher institution where theoretical knowledge can be used in a training for technician-type jobs, and when so few secondary school science graduates proceed on to University to read Science, it seems hardly relevant to this aim to teach more science in secondary schools.

In the survey of educational aims we noted a concern amongst Kuwaiti educationalists that graduates should be produced capable of working in all sections of the economy. In Chapter Five, we established the blend of output from schools and institutions of Kuwaitis between 1970 and 1980, and the likely demand for their services in the same period. One

conclusion of that Chapter was that without data on the cost of each type of graduate and the benefit to Kuwait of the same, it was not possible to define Kuwait's optimal combination of resources. However, it was tentatively put forward that if Kuwait valued those persons with more skills more highly than those persons unskilled, and if she took as an aim to produce graduates in approximate numerical proportion to their demand, then there was an imbalance in the output of different types of graduates. In particular, we noted a relative shortage of supply of Kuwaitis with Science based degrees (A-1), and Kuwaitis having one to three years post secondary education (B); Technicians, Teachers, etc. We noted a relative surplus of Kuwaitis with Arts based University degrees (A-2), and "General" secondary school graduates (C-1).

In this Chapter we have provided some detail on the educational system, and the origins of these surpluses and shortages are relatively clear. Most Kuwaiti boys in the Secondary level enrol in the "General" branch; there are almost no "Technical" training institutions after secondary level; Kuwaiti boys tend to avoid training to be teachers and prefer to read "Arts" degrees, but not "Science" degrees. Describing this situation is not a difficult task, though a somewhat laborious one. In Chapter Four, Part I we saw that the government uses employment as a means of distributing income between Kuwaitis; government pay is high, and all Kuwaitis are legally entitled to a job with the government. As a result, most of them do work for the government. We would expect Kuwaitis to use government pay rates for different jobs as a basis for making decisions relating to their career choice. Government pay scales for different jobs are shown here on Table 6.17.

TABLE 6.17. AVERAGE MONTHLY WAGE IN THE GOVERNMENT AND PRIVATE SECTORS. (1974).

<u>Occupational Group.</u>	<u>Average Monthly Wage, (K.D.)</u>	
	<u>Government</u>	<u>Private</u>
A-1: Professional and Scientific Occupations usually requiring a Science/Maths based University degree	258	276
A-2: Professional occupations usually requiring an Arts based University degree	221	166
B: Sub-professional and technical occupations usually requiring one to three years post secondary education	158	114
C-1: Skilled office occupations usually requiring secondary completion	152	88
C-2: Skilled manual occupations usually requiring Vocational and/or Training Related classroom instruction.	103	57
C-3: Semi-skilled manual occupations, usually requiring Literacy plus on-the-job training.	105	55
D: Unskilled manual occupations not requiring special education or training	69	32

Source: Taken from: Planning Board, Kuwait, Statistical Abstract, 1974.

Note: See Table 4.13 and Section 4.3. (h).

The implications for the educational and training systems of these pay rates were briefly mentioned at the conclusion of Part I of Chapter Four, but will be discussed here more fully. First, it is evident that "skilled office workers" (C-1) are more highly rewarded than "skilled manual workers" (C-2), which suggests an explanation for the avoidance of "Technical" secondary and Vocational schools generally, by Kuwaitis, and a preference for "General" secondary. Secondly, a comparison of the average pay of those in "Technical" occupations and those in "Skilled Office Occupations" shows that the pay which the former group receive is only marginally better than that of the latter group, though for the former group the cost of acquiring the skill of a technician is probably two or three years foregone income. Over a seven year period the present value of the "Skilled Office Workers" income is 29% greater than that of the Technician (assuming a discount rate of 5%, annual increments of K.D. 96

for the office workers and K.D.120 for the Technician). It is therefore hardly surprising that there is an excess supply of Kuwaiti skilled office workers, and that Kuwaiti men avoid technician training.

The financial reward paid to "Professional and Scientific" workers is 16% greater than that paid to "Professional Occupations" which usually require an Arts Degree. But the large majority of Kuwaitis opt for the latter. Close inspection of the performance rates of Kuwaitis in the Science Faculty at Kuwait University shows that in 1972/73, for every 100 entrants to 1st Grade, only 44 graduated, compared with 68 from the Arts Faculties. The very high risk of failure attached to Science courses removes the advantage of higher pay which Science graduates earn initially.

e) Summary.

i) Universal Primary Enrolment.

Most Kuwaiti children of Primary school age are in school, and this has been the case probably since about 1965.

ii) Standard of Education.

If we use examination performances to measure the "standard of education", then that which Kuwaiti boys attain is significantly lower than that attained by Non-Kuwaitis or by Kuwaiti girls. This characteristic of Kuwaiti boys is discernible from the Primary stage to the University.

iii) Self Sufficiency in Teachers.

While significant numbers of Kuwaiti women are training to be teachers, few Kuwaiti men are. There are signs that the Kuwaiti share of all teachers may fall in the next few years.

iv) The Preparation of Graduates for Kuwait's Coming Industrial Expansion.

The "Technical" branch of secondary education accounts for a very

small proportion (4.5% in 1974/75) of the total in that level, and this share is falling. Within "General" secondary, the number and share of Kuwaiti boys is increasing, but very few pass on to the University and read "Science" based degrees. The absence of an alternative "Applied" Science institution to the University means that there is no method of training technicians in Kuwait, except in limited numbers in some vocational training centres.

The technical school and vocational training institutions appear to experience not only the usual inadequacies of such institutions as means of training "blue collar" workers, but also they appear to be inappropriate for Kuwait, as few blue collar workers have more than literacy, and they are regarded as a second best alternative. The least able pupils enrol, often only as a means of obtaining a job with the government.

v) An Appropriate Blend of Output.

In so far as it is possible to assess the appropriateness of the blend of output from Kuwait's schools and training institutions, it appears that it is not in harmony with the stated aims of educational planners, and the needs of the economy.

vi) Conclusion.

The aims which educationalists set for the educational system and training institutions appear to be appropriate to the needs of the economy. Yet remarkably few of these aims appear to be accomplished. To some extent, the problem lies within the educational sphere. Without a higher institute of Applied Science, secondary school science graduates are left with no alternative besides vocational training or the University. A question mark hangs over the use of "technical" and "vocational" schools as suitable vehicles for training "blue collar" workers, as they work in Kuwait.

However there are substantial aspects of the educational system over

which planners have apparently no influence. Thus attempts to encourage students to study in the technical college, to increase the number of Kuwaiti boys training to be teachers, to increase the number of Kuwaiti men studying science at University have all been relatively fruitless. However, a Civil Service stipulation that Intermediate "drop outs" must enrol in a vocational training institution to qualify for government employment doubles the number of applications for Shuwaikh Industrial Training Centre in one year. In the explanation of that phenomenon lies an essential point to assessing educational investment. The government uses employment as a means of distributing wealth. It pays Kuwaitis to work for the government, and when choosing a career they maximise their income. The pattern of Kuwaiti enrolment in school is largely a response to the signals they receive from the labour market, in particular, relative rates of pay for different jobs in the government.

In short, there is a divergence between the private and the social rate of return to investment in human capital for Kuwaitis, the result of the salary structure the government has created for Kuwaitis. The effect of this divergence in the short term is a very substantial waste of educational resources, and in the longer term, a continued reliance on expatriate labour, which may restrict the extent to which the government is willing to continue to pursue one of the aims of its economic development, to industrialise. Unless the government takes steps to adjust the pay and incentives for different jobs so that social and private rates of return are aligned, Kuwait's investments in human capital will continue to make little contribution to her development.

PART II.BAHRAIN.Introduction

With a longer experience of education than Kuwait or Qatar, Bahrain's educational system has had the opportunity to adapt to changing needs in the economy. In some respects she has fulfilled previous educational aims, in other respects she has not. Bahrain's economy has developed most rapidly in the past five years, and however adequate Bahrain's educational system and training institutions were five years ago, the changing character of the economy has altered this. In particular, the growing demand for appropriately trained workers for Bahrain's industrial development has created different sets of priorities for educational planners.

The manpower requirements of Bahrain's current economic development have raised the same question over the efficiency of a suitable training at school for "blue collar" jobs as we noted for Kuwait. There would appear to be a case for reconsidering the role of the technical schools in this capacity, and possibly of devising a more coherent training strategy for particular occupational groups.

6.4. Aims of the educational system and training institutions.

The aims of education in Bahrain, listed below, have emerged from a consideration of government documents, occasional papers of Ministry Officials, and papers given by government officials at conferences.

These aims are not totally comprehensive, but they summarise those which concern this study. They are as follows:

a) Educational Standards.

"Improving the internal effectiveness of the system" is cited as an objective which the Ministry of Education has recently come to see as important. Previously, more emphasis had been placed on quantitative development, and this had taken its toll on standards.³⁵

b) Universal Primary Enrolment.

The aim of enrolling all children in school between the age of six and fifteen is often stated, both by educational planners and by educationalists.³⁶ There is a considerable difference between the proportion of children enrolled in rural areas and in urban areas.

c) Teachers.

The standard of teaching and qualifications of teachers should be improved. Also, more Bahraini teachers should be trained.³⁷

d) Technical and Vocational Education.

Technical and Vocational education should be developed to meet the ever increasing needs of the economy, and altered to produce a more useful graduate.³⁸

e) Training for the needs of the economy.

The Ministry of Education originally saw the provision of schools and a University education as a means of ensuring a supply of well trained civil servants, teachers and good citizens. Abdul Malik al-Hamer writes that the purpose of the first secondary school, "Manama College",

which opened in 1940 was "to provide higher education and character training for those Bahraini schoolboys who would later become government servants and government school masters".³⁹ In 1968 students in secondary school saw the purpose of their education similarly; 72% of the respondents in a sample survey of school leavers stated that they saw the purpose of education as either to prepare students for University or to prepare good citizens.⁴⁰ More recently, government writings and commentators in Bahrain have shown some disillusionment with purely "academic education", exemplified by "General" secondary education. This is partly a consequence of the difficulty which graduates from this part of secondary schools (and particularly the "Arts" graduates) have in obtaining a job.⁴¹ One commentator has written that "the people of Bahrain have always tended to look upon academic secondary education as 'the only road' to a better future career for their children". This attitude, writes the author, must be changed, and the needs of the economy in manpower more closely examined.⁴²

6.5. The Operation of the Educational System and Training Institutions.

When writing about Bahrain's educational history, social historians have disagreed over the date when formal education began in Bahrain. Rumaihi⁴³ and Winder⁴⁴ have observed that the first "school" in Bahrain, apart from the many "Kuttab" schools, was opened in 1892 by the American Arabian Mission. It was a girls' primary school. Other commentators⁴⁵ have seen 1919 as the time modern education began in Bahrain. A school was opened in that year, and financed by the merchants of the community.⁴⁶ In any event, education clearly made an early start in Bahrain relative to other Gulf States, and between 1919 and 1932 other schools opened, including a girls' school in 1928 and a special boys' school for members of the Shia" sect, who would not enrol in the first school for religious reasons.⁴⁷ In 1932 the responsibility and administration of all education in Bahrain was handed over to the government.⁴⁸

The first secondary school to open was the Technical School, in 1938. This school was followed by "Manama College" in 1940, a general secondary school for boys. In 1928 the first Bahrainis enrolled in the American University of Beirut. By 1956, a total of 114 students were studying abroad in some capacity or other. The first students to receive teacher training graduated from the Manama College in 1944, and were sent to Cairo to train there.

By 1951 the first secondary schools for girls opened, and in 1956 some of the graduates were sent to the Beirut College for Women to be trained as teachers.

The pattern of schooling in Bahrain has altered slightly several times. The current arrangement is that six years primary is followed by the two years in an intermediate level, followed by three years in the secondary level. It is planned to extend the intermediate level by one year, thus providing twelve years education.

By 1960, 23,000 pupils were enrolled in schools in Bahrain; they were almost all in the Primary level, with only 2.3% of total enrolment in the secondary level, as Table 6.18 shows. Between 1960 and 1973 a more evenly balanced system developed, and by the later year, secondary school enrolment accounted for 14% of the total. A considerable bias has developed in secondary school education towards the "General" secondary schools, where 80% of all secondary enrolment in 1973/74 is found.

TABLE 6.18. ENROLMENT BY LEVEL IN 1960/61 AND IN 1973/74 IN SCHOOLS IN BAHRAIN, BY SEX.

Sex:- Level.	1960/61.				1973/74.			
	Male.	Female.	Total.	%	Male.	Female.	Total.	%
Primary	13670	7394	21064	92.0	21943	16704	38647	70.3
Inter- mediate	1068	258	1326	5.7	4476	3566	8042	14.6
Secondary								
General	216	112	328)		2891	3506	6397)	
Commercial	65	-	65)	2.3	500	357	857)	14.4
Technical	146	-	146)		633	-	633)	
Religious	-	-	-		15	-	15	
Teacher Training	-	-	-		134	252	386	0.7
Total	15165	7764	22929	100.0	30602	24385	54987	100.0

Source: Ministry of Education, Bahrain, Educational Statistics 1961/71.
Ministry of Education, Bahrain, Educational Statistics, 1973/74.

In 1960/61 girls represented 34% of all pupils in school; by 1973/74 their share had risen to 44%, and 49% in the secondary level.

To explain the large number of students in the "General" secondary stream, we must first consider the structure of the system. A successful completion of a terminal examination in the primary level leads to promotion to the Intermediate level. Successful completion of the Intermediate level gives a student a choice of the "General" or "Commercial" secondary for boys and girls, and additionally for boys, "Technical" secondary.

The "Commercial" specialisation of the secondary stage is a terminal one; the only option for further studies is with the Gulf Technical College, but without government assistance. Similarly, the "Technical" specialisation is also terminal, except that students may receive government assistance and study technical subjects in the Gulf Technical College. After completing several years there a student may qualify to study for a Higher National Diploma (H.N.D.) in the United Kingdom. He will then be a qualified technician, with five years post-secondary study behind him.

Able students of the "General" specialisation may qualify for government scholarships to study in Universities abroad. A science graduate may obtain a place in say Cairo University, and return after four years with an Engineering Degree. His salary will be higher than that of the technician with a H.N.D., and he will have spent one year less on his studies, and possibly be less well qualified. From the fact that students prefer to take University degrees, it seems that Bahraini students make career choices which maximise the financial return to their education. Further evidence on this is found in a survey which Malik al-Hamer conducted in 1968 on the attitudes of 130 final year secondary students to their future careers.⁴⁹

In the view of the author of the report, the major factors which influenced students' choice of occupations were as follows:-⁵⁰

- (i) the financial reward;
- (ii) social status;
- (iii) conditions.

Bengrave, writing in 1960, was also of the opinion that the first priority of students in their educational choice is financial reward. He wrote: "education was, and is still, regarded solely as the means to enable a young man to earn more money".⁵¹

It appears that so many students enrol in "General" secondary education because it is only by the "General" secondary stage that promotion to University can be obtained. The desire for a University education may stem from a natural wish to achieve good qualifications and thereby obtain a job with status, but probably much more from a belief that University graduates get the best paid jobs.

Since Malik al-Hamer's work, student enrolment patterns have changed very little. Table 6.19 shows that between 1970/71 and 1973/74 the share of "General" secondary in boys secondary education has reduced only slightly to 71.1% in 1973/74. The share of "Technical" secondary has increased slightly, and "Commercial" secondary has remained constant. The increase in the enrolment in "Technical" secondary may partly be the result of the remunerative opportunities for skilled artisans which have occurred since around 1970. A skilled welder in Bahrain may now earn as much as B.D. 148 per month, while a teacher obtains B.D. 90 per month after two years post secondary training.⁵²

An interesting development in girls education is the rapid development of the Commercial school. It is believed that this has been in response to two factors: First, graduates of the commercial school have been accepted by the Gulf Technical College for training in office skills. The rapid expansion of the economy and of financial institutions after 1970 has resulted in a shortage of secretaries and office personnel. Women graduates of the Gulf Technical College with secretarial skills are paid extremely well, and probably earn more than their contemporary male graduates in more conventional fields; second, office work has become one area where it is socially acceptable for women to work.

TABLE 6.19. DISTRIBUTION AND NUMBER OF STUDENTS IN EACH LEVEL
OF SECONDARY EDUCATION FOR BOYS AND GIRLS, 1970/71 TO 1973/74.

	<u>1970/71.</u>	<u>%</u>	<u>1971/72.</u>	<u>%</u>	<u>1972/73.</u>	<u>%</u>	<u>1973/74.</u>	<u>%</u>
<u>Specialisation</u>								
<u>Girls</u>								
Secondary General	2511	98.5	2897	96.4	3131	93.1	3506	91.8
Secondary Commercial	38	1.5	109	3.6	232	6.9	359	9.2
Total	2549	100	3006	100	3363	100	3865	100
<u>Men</u>								
Secondary General	2731	75.5	2435	68.4	2654	69.7	2891	71.1
Secondary Commercial	452	12.4	524	14.7	540	14.2	515	12.7
Secondary Technical	439	12.1	601	16.9	614	16.1	657	16.2
Total	3622	100.0	3568	100.0	3808	100.0	4063	100.0

Note: (1) The small number of students enrolled in "Religious Education" are not included here.

Source: 1970/71: Ministry of Education, Educational Statistics, 1961/71, Sections F, b and H.
1971/72: Ministry of Education, Educational Statistics, 1970/71, Section 8.
1972/73: Ministry of Finance and National Economy, Statistical Abstract 1973, p.18.
1973/74: Ministry of Education, Educational Statistics 1973/74, Section 12.

In Part I we noticed a difference in performance between Kuwaiti boys and girls in schools; a differential exists between Bahraini boys and girls in examination performance, but not such a substantial one. In Bahrain, there has been considerable opposition to women's education; when it began in 1929 religious leaders were strongly opposed to the idea. Although most of the opposition to their education has subsided, a residue remains in rural areas.⁵³ (In al-Hamer's survey, he enquired into the area where parents of pupils lived and into their educational attainments. Of the 41 girls in their final year, only 7% (3) came from a rural area, while 40% of boys did. It seems that the girls who are sent to school often have well educated parents).

It is thought that different factors influence girls educational choice to those which influence that of the boys. When choosing between alternative courses of education, girls have a strong preference to choose an option which will ultimately lead them to employment. A University education carries with it a good chance of an acceptable job. More evidence on this point will be dealt with later, but it is suggested that for women, educational choice is made on the basis of the following criteria: (a) the opportunity of eventual employment; (b) the financial rewards; (c) the opportunity of socially acceptable employment. From what has been said, it seems that both Bahraini boys and girls are very strongly motivated by financial rewards.

Table 6.20 shows the development of "General" secondary education for boys and girls by grade and year; it is clear that not only are there more girls in the secondary level than boys, but also that their enrolment in the 1st stage is the greater. In the second grade, a choice is permitted between the "Arts" and "Science" streams. The figures in

TABLE 6.20. ENROLMENT OF BOYS AND GIRLS IN THE SECONDARY LEVEL ACCORDING TO STAGE AND SPECIALISATION, 1968/69 TO 1973/74.

	1968/69.	1969/70.	1970/71.	1971/72.	1972/73.	1973/74.
1st grade: male	1465	916	983	1091	1331	1316
female	853	1131	993	1293	1201	1413
2nd grade: Science:						
male,	369	513	406	417	414	567
female	120	146	261	279	396	369
2nd grade: Arts:						
male	410 (52.6%)	373 (42.0%)	333 (45.0%)	245 (37.0%)	275 (39.9%)	284 (33.3%)
female	473 (79.7%)	478 (76.6%)	539 (67.3%)	473 (62.8%)	672 (62.9%)	564 (60.4%)
3rd grade: Science:						
male	293	374	557	373	399	465
female	73	142	166	265	317	384
3rd grade: Arts:						
male	464	414	452	309	235	259
female	385	535	552	587	545	776
Total:						
male	3001	2590	2731	2435	2654	2891
female	1904	2432	2511	2897	3131	3506

Source:- 1968/69 to 1970/71: Ministry of Education, Educational Statistics 1961-1971.

1971/72: Ministry of Education, Educational Statistics 1970/71, Section 8.

1972/73: An estimate taken from Socknat, J., Manpower Projections, February 1974, Bahrain, pps. 223 & 242.

1973/74: Ministry of Education, Educational Statistics 1973/74, Section 12.

brackets show the percentage of each sex enrolled in the "Arts" specialism. In 1973/74 only one third of all boys chose to enrol in the Arts stream and the proportion who do so is falling each year. It is thought probable that the swing towards science in secondary stage reflects the greater number of jobs for university graduates which require a science based training. It is not the case that these students are entering Teacher Training; fewer men each year are now enrolling in the Teacher Training Institutes. Table 6.21 shows that in 1962/63, Bahrain relied upon 302 expatriate teachers to man her schools, which accounted for 28% of the total number. By 1970/71, Bahrain had 564 expatriate teachers, but the stock of Bahraini teachers had risen from 784 to 1,866 over the period.

TABLE 6.21. TEACHERS IN BAHRAIN BY NATIONALITY IN 1962/63 AND 1970/71.

<u>Nationality.</u>	<u>1970/71</u>		<u>1962/63.</u>	
	<u>Number.</u>	<u>%</u>	<u>Number</u>	<u>%</u>
Bahraini	1866	76.7	784	72.2
Egyptian	152	6.2	60	5.5
Palestinian	169	7.0	78	7.2
Jordanian	153	6.3	70	6.4
Lebanese	24	1.1	45	4.2
Other Arabs	8	0.3	16	1.4
British	22	0.9	2	0.2
Indian	18	0.7	25	2.3
Pakistani	14	0.6	6	0.6
Other Non-Arab	4	0.2	-	-
Total	2430	100.0	1086	100.0

Source: Ministry of Education, Bahrain, Educational Statistics 1961/71, p.69
Ministry of Education, Bahrain, Educational Statistics 1970/71, p.69.

The share of Bahraini teachers has also risen from 72.7% to 76.7% of the total. This position of relative self-sufficiency in teachers provides a distinct contrast with Kuwait.

6.6. An evaluation of the investment in human resources.

a) Educational Standards.

We have already noted the rapid quantitative development of education in Bahrain; however, quality of education, as reflected by student performance rates, by the Ministry of Education standards, low at present. Table 6.22 shows student performance in each level of education by sex for 1973/74. The table deals with the three alternatives which students have: "dropping out", "repeating" or "passing".

It is very clear from the table that girls repeat a year less often than men, 15.0% of their total repeat compared to 20.7% of boys, and they "drop out" less frequently; 1.7% versus 4.0%.* The corollary of this is that in most levels they are more successful in examinations than boys. It is thought that they perform less well in exams at the secondary level with boys because by that stage many less able boys have already "dropped out".

On the whole, performance rates in secondary schools are poorer than they are in other parts of the system, where occasionally quite high standards are attained. For example, 91.2% of all girls in the Intermediate stage pass their terminal examination, though a very large number of boys drop out of the secondary stage, especially in the commercial school (17.2%).

One of the most unsatisfactory aspects of Bahrain's educational system is the number of repeaters. One fifth of all boys in the system in 1973/74 were repeaters, and almost one sixth of all girls. As a result the total number of years which an average student repeats in his school career is obviously considerable. The extra cost which these repeaters represent is great, both financially and in terms of teachers' time. A particularly high figure for repeaters is found in the boys' commercial school (29.8% in 1973/74).

* significant at 5% confidence interval.

TABLE 6.22. STUDENT PERFORMANCE BY LEVEL AND SEX, 1973/74.

<u>Level:</u>		<u>Successful.</u>	<u>Drop Outs.</u>	<u>Repeaters.</u>
Primary:	Male	77.0	3.0	21.4
	Female	83.0	1.6	17.5
Intermediate:				
	Male	79.8	5.4	16.7
	Female	91.2	1.9	7.5
Secondary: (General)				
	Male	67.6	6.7	20.6
	Female	65.7	3.1	11.7
Secondary: (Commercial)				
	Male	64.3	17.2	29.8
	Female	56.5	1.9	10.0
Average:	Male	75.3	4.0	20.7
	Female	83.3	1.7	15.0

- Notes: (1) Those percentages which refer to "successful" candidates of the General and Commercial Secondary are for students in the final stage only.
- (2) Neither Secondary Technical nor Secondary Religious education is included here on account of the non-comparability of those two specialisations with those shown here.

Source: Abstracted from various tables in Ministry of Education, Educational Statistics, 1973/74.

The Planning Directorate in the Ministry of Education attributes this high level of wastage and the poor performance rates to a shortage of well trained teachers and suitable school buildings.⁵⁴ We will investigate the position regarding teachers later. In conclusion, it seems that while the overall performance of pupils in Bahraini government schools is low, that of the girls is noticeably better than that of boys.

b) Universal Primary Enrolment.

Although Bahrain has experienced education for a greater length of time than any other state in the Gulf, it still has a large number of illiterates in the school aged population. This is largely because educational investment has tended to be concentrated into urban areas at the expense of rural areas. Table 6.23 compares the share which illiterates represent of the "non-school" population in the Capital, Manama, and in Jidhafs, a market village five miles to the west of Manama. Only 8% of the "10-14" age group of Manama's population are illiterate compared with 38% of the corresponding age group of Jidhafs population.

TABLE 6.23. THE PROPORTION OF ILLITERATE PERSONS BY AGE COHORT IN MANAMA AND JIDHAFS (IN PERCENTAGES).

<u>Age.</u>	<u>Manama</u>	<u>Jidhafs.</u>
5-9	41%	71%
10-14	8%	38%
15-19	21%	46%
20-24	41%	59%
5-24	27%	55%
Total population of 5-24's:	41,222	9,434.

Source: Taken from the master copy of the Census, 1971, contained in the Statistical Bureau, Ministry of Finance, Bahrain.

Table 6.24 shows that for the entire six and seven year old Bahraini population, 65.3% of the boys are in school and 49.1% of the girls. Clearly, there is a need for a considerable expansion of some form of Primary education, particularly in rural areas. This may require not only extra classrooms and schools, but also, many more teachers. It is interesting to note that fewer girls enrol than boys in Primary schools, which suggests that there remains some opposition to the education of girls in Bahraini society.

TABLE 6.24. THE PERCENTAGE AND NUMBER OF SIX YEAR OLD BAHRAINIS IN SCHOOL OF ALL SIX YEAR OLD BAHRAINIS BY SEX IN 1971.

	<u>Total population aged six.¹</u>	<u>Total Primary School Enrolment of six year olds.²</u>	<u>% in School.</u>
Male	6512	4256	65.3
Female	6494	3189	49.1

Source: (1) Calculated from Socknat, J., Projections of Manpower Demand and Supply, p.180 & 184., Socknat estimates the corrected Census figure to allow for undercounting, using exactly the same method as was used for Kuwait in Chapter 3, Pt.1, Appendix 1.

(2) Ministry of Education, Educational Statistics 1961/1971, p.81.

c) Self sufficiency in teachers

Bahrain has consistently managed to staff the majority of her schools with her own teachers. Unlike Kuwait or Qatar, she has a relatively extensive experience in education, and has not had a rapid upsurge in school enrolment in recent years.

In 1966 a mens' Teacher Training College opened, and a similar college for women was opened in 1967.⁵⁵ Prior to that time, a training in teaching method was given to secondary students as part of their secondary education; they were then regarded as qualified to teach in Primary schools. The Teacher Training Colleges have rapidly increased their enrolment to a total of 386 in 1973/74, as shown by Table 6.25. Since 1968 more women than men have enrolled in the College, and two important developments have occurred since then; teaching has become one of the few professions in which it is socially acceptable for women to work, and for which the training is relatively accessible. Secondly, the alternative employment opportunities for men have increased, and the security of the teaching profession may no longer be as attractive.

TABLE 6.25. TOTAL ENROLMENT IN THE TEACHER TRAINING COLLEGE
BY SEX, 1966/67 TO 1973/74.

	<u>1966/67.</u>	<u>1967/68.</u>	<u>1968/69.</u>	<u>1969/70.</u>	<u>1970/71.</u>	<u>1971/72.</u>	<u>1972/73.</u>	<u>1973/74.</u>
Men	25	66	94	110	138	146	149	134
Women		37	95	124	151	166	203	252
Total	25	103	189	234	289	312	352	386

Source: Ministry of Education, Annual Statistics 1973/74, p.61.

Table 6.25 shows a fall in the total enrolment of men in the Teacher Training College from 1972/73 to 1973/74 of 15, when womens' enrolment increased by 49. Besides the shortage of men training to be teachers, a serious shortage of male science and mathematics teachers has occurred in the last few years. Table 6.26 shows that of the total enrolment in the Colleges in "Science and Maths", men constitute only 33 teachers out of the 154 (21%).

Graduates of the Colleges may teach in the Primary or Intermediate level. Officially, only holders of University degrees may teach in the secondary level, but many without degrees do teach at that level. In 1973/74, there were 168 male teachers and 169 female teachers in the

secondary stage. Table 6.27 shows that only 11 Bahraini teachers have University degrees, and only 156 non-Bahraini teachers have degrees, which means that 170 teachers in the secondary stage did not have degrees. Table 6.27 also shows that a large number of Bahraini teachers have no training (41%) and are the product of the old system of teacher recruitment. The few Bahraini women who are teaching are better qualified than the men. To improve the qualifications of both Bahraini men and women has been the concern of a U.N.I.C.E.F. project, which is currently attempting to give all untrained Bahraini teachers a short period of in-service training.

TABLE 6.26. ENROLMENT IN THE TEACHER TRAINING COLLEGE BY SPECIALISATION GRADE AND SEX IN 1973/74.

<u>Specialisation.</u>	<u>Physical Educa- tion.</u>	<u>Fine Arts.</u>	<u>English Lang.</u>	<u>Social Services.</u>	<u>Arabic Language & Islamic Religion.</u>	<u>Science & Maths.</u>	<u>Total.</u>
<u>Grade 1</u>							
Men	7	7	9	5	9	12	51
Women	10	9	14	6	29	61	129
Total	17	18	23	11	38	73	180
<u>Grade 2</u>							
Men	10	12	17	9	14	21	83
Women	7	12	14	16	14	60	123
Total	17	24	31	25	28	81	206

Source: Ministry of Education, Annual Statistics 1973/74, p.62.

TABLE 6.27. TEACHERS' EDUCATIONAL QUALIFICATIONS BY NATIONALITY AND SEX IN 1973/74.

<u>Qualifications:</u>	<u>BAHRAINI:</u>				<u>NON-BAHRAINI:</u>			
	<u>Male</u>	<u>%</u>	<u>Female</u>	<u>%</u>	<u>Male</u>	<u>%</u>	<u>Female</u>	<u>%</u>
Less than secondary	66	6.2	88	11.5	1	1.0	3	2.3
Secondary	400	37.7	196	25.5	28	27.2	13	10.1
Post Secondary	568	53.6	478	62.2	9	8.7	22	17.1
University or higher	5	0.5	6	0.8	65	63.1	91	70.5
Total	1059	100.0	768	100.0	103	100.0	129	100.0

Source: Ministry of Education, Annual Statistics 1973/74, p.23 & 24.

When it was mentioned to officials in the Ministry of Education that there were indications that both the share of male Bahraini teachers represented in the total was falling, and would continue to fall, they made two observations.⁵⁶ The total supply of male teachers is not limited

to those in the Teacher Training Colleges; there are approximately 256 Bahraini men studying abroad for University degrees,⁵⁷ some of whom may eventually teach. Second, to remedy a shortage of male teachers in the Primary stage, which has not occurred so far, the Ministry has plans to use Bahraini women teachers in boys Primary schools. The far-reaching consequences of this development, both for Bahrain and other countries in the area cannot be over-stated. Kuwait already has a large excess of Primary school women teachers relative to her requirements for Kuwaiti girls, and in the future others may wish to follow Bahrain's example.

- d) Technical and Vocational education, and training graduates for the needs of the economy.

From the survey of Bahrain's economy it is clear that there is, and has been for some time, a sizeable "industrial sector". Moreover, unlike Kuwait, in Bahrain, nationals have participated in these concerns since the earliest days. The demand in Bahrain for more "industrial" workers is likely to entail changes of emphasis, rather than sizeable new programmes of investment in human resources. From a comprehensive "Manpower Assessment" of Bahrain, made in 1974, similar to Chapter 5 in this thesis on Kuwait, it is clear that Bahrain has a sufficient number of persons on the island to be almost self-sufficient in labour by about 1988.⁵⁸ But the demand for different types of labour will be balanced by the supply of the same only if an appropriate training is provided for each skill level.

We can define at least four types of jobs that Bahrain must train her people to enter; engineers, technicians, skilled, and semi-skilled manual workers. At present, engineers tend to be trained abroad, technicians in Bahrain's "Gulf Technical College", and subsequently in the United Kingdom on a Higher National Diploma course, and "blue collar" workers in Bahrain's two technical colleges.

When attempts have been made to train for these three classes of skills, both educational and economic problems have been met. The latter type of problem occurs when Bahraini students use training as a means of obtaining a higher salary, and not as a means of learning the skills for which that training is designed. Our evidence has shown that Bahrainis tend, by Gulf standards, to be poor, and probably respond to market signals positively. Hence the solution to the "economic" problems which Bahraini educationalists face will involve some use of financial incentives of pay adjustment.

The technical schools aim to prepare pupils for skilled and semi-skilled manual occupations.⁵⁹ In attempting to do this they have been faced with two problems: in common with many of the technical/vocational education training centres in the developing world, the Technical School has found that its graduates were ill equipped for immediate entry into the workforce.⁶⁰ The graduates are comparatively young, and are not used to the rigours of a long and physically tiring day. More important, they do not possess the manual dexterity or the experience to compete with those who have learned the skill on-the-job, and who have some experience of the job. It will be recalled that in both Kuwait and Bahrain, very few of the expatriate workers in these types of jobs had a "secondary school" education, and most had very little formal education (see Tables 4.62, 4.71). Second, although graduates of the school have been in very great demand, it should not be thought necessarily that the Technical School has been successful in training skilled craftsmen for employment in Bahrain's industry. The two large companies of Bahrain, Bahrain Petroleum Company and Aluminium Bahrain have a need for young Bahrainis in Technician and Sub-technician posts. Their policy has been to recruit technical secondary school leavers, and after a period of service in the company, to train the individual for the particular job opportunity. In 1974 there were 140 graduates, and companies in Bahrain offered them 400 posts.⁵³ The Ministry of Education, on the

other hand, sees graduates of the "General" secondary school "Science" stream taking up these types of posts and eventually becoming technicians. Graduates of the Technical School, academically less able than the General secondary students, should enter the workforce on graduation from the Technical school as semi-skilled craftsmen, becoming skilled craftsmen after some work experience and possibly further training at the Gulf Technical College.

The employers' viewpoint is somewhat different; when recruiting potential technicians, the two primary considerations are: is the candidate orientated to working in an industrial environment which includes shift working? and; is the candidate likely to be trainable in the necessary field, and in particular, how good is his English? At a seminar of employers and government held in Bahrain in February 1974 on the relationship between school and employment in Bahrain, these two qualities were stressed in almost every paper presented by the employers. The Aluminium Bahrain representative said "English is not essential to obtain work at Alba, but it is necessary in order to progress to a supervisory position".⁶¹ Much of Gulf Aviation's training consists of English Language training.⁶² The paper given by Bahrain Petroleum Company's representative stressed the attention paid to the suitability of the candidate's background and training when recruiting future employees. A student with a father employed by an industrial concern is seen as a "suitable background".⁶³

General secondary school science graduates apparent are not well orientated to working in an industrial environment. For this reason, employers involved in recruiting for industrial concerns in Bahrain tend to recruit from the Technical schools. Moreover, they tend to recruit particularly from Manama Technical School, where instruction is given in English, unlike the other Technical School or the General Secondary schools, where Arabic is used as a medium of instruction.

The Staff of Manama Technical School reported that when making offers of employment to final year students,⁶⁴ employers pay close attention to a student's performance in English.

It appears that at present the Technical Schools have two functions for employers in Bahrain: to supply young Bahrainis who have some experience of an industrial type of environment, and to supply young Bahrainis who have a reasonable grasp of English. Employers then proceed to provide the technical training which they see as being most useful.

This situation implies that two changes should be made. First, the curricula of the Technical School should be altered to fit more nearly the demands of the employers. If employers believe that only they can provide a useful technical training, and are prepared to bear its cost, but require young Bahrainis with an appreciation of the rigours of industrial life and good English, then the Technical School might alter its curriculum to meet that requirement. This should be much easier and less expensive than, for example, attempting to train a young Bahraini to be a top class automotive mechanic.

While this change would rationalise the training of Bahrain's future technicians, it makes no contribution to the problem of a future supply of skilled manual workers. It is thought, though there is little concrete evidence to support this view, that school "drop outs" eventually become skilled and semi-skilled craftsmen. The formal structure of Bahrain's education eliminates them from further training in the system, except for a few who may enrol in evening classes at the Technical School. If the criticism of technical school graduates as "blue collar" workers was that they lacked manual dexterity, and were unused to the rigours of industrial life, and if expatriate workers in these jobs tend not to have a formal education background, then a different strategy of training for these jobs seems appropriate. A more suitable clientele for training would appear to be

adult Bahrainis who have some industrial experience. It may be that literacy is the minimum educational prerequisite, and that training for "blue collar" jobs should consist in literacy training with job orientated instruction. This point, mentioned in the Socknat "Manpower Assessment" of 1974, has not been completely accepted in Bahrain, and recently the commission of two additional "Technical Schools" was announced.⁶⁵

The growing awareness by the Ministry of Education that "purely academic" education, typified by the "General" secondary option, does not train a particularly useful graduate for employment in Bahrain's developing economy, has not changed the pattern of enrolment. Table 6.19 shows that General secondary schools in 1973/74 still absorbed 71.1% of all boys' secondary level enrolment, and this was an increase of 1.4% over the previous year. But a close inspection of Secondary school enrolments shows that an increasing majority of boys in Secondary schools are studying "Science" (see Table 6.19). It seems almost certain that this trend reflects the fact that it is only possible to qualify for a scholarship to study abroad for a University degree from General secondary, and easier still from the Science specialism, and the fact that up to now, some graduates have been paid very well in government. However, educationalists have noted that graduates of Bahrain's Gulf Technical College, who have studied in the United Kingdom for a Higher National Diploma, are better qualified as "engineers" than graduates of Science faculties of Middle Eastern Universities, a phenomenon not confined to developing countries like Bahrain. Although the pay and status of those with H.N.D.'s may at present be lower than that of University graduates, it seems inevitable that the labour market will respond to this difference in relative productivities, unless the government maintains high salaries for graduates and continues to employ them. If the social rate of return to the education of these University graduates is low (despite a high private rate of return) then the policy of sending science graduates abroad to study in Universities to read "Pure" Science degrees should be reconsidered. The large proportion of Bahrainis

enroling in "General" secondary will not alter until the government acts either to change the level of rewards for graduates, or to limit their enrolment. To wait for the market forces to effect a re-allocation seems to ignore the pressing need which Bahrain has to create a diversified economy which does not rely on expatriates in senior positions.

e) Conclusion.

i) The quality of education, measured by pupil performance rates, is lower for boys than for girls, and in general is not high, with the result that almost one fifth of all students in 1973/74 were repeating a year's study.

ii) While illiteracy has been reduced to a very low level in urban areas, rural areas still experience a high level, and have relatively fewer schools per capita.

iii) As Bahraini men show less inclination to become teachers, Bahraini women show more. Substituting women teachers for men at the primary level will certainly help to reduce the shortage of male teachers, but in the long run, a radical adjustment of teachers' pay may be necessary in order to alleviate this problem.

iv) The current approach to training for technical, and skilled and unskilled jobs is not ideal. Graduates of the "Secondary Technical" school are found to be ill-equipped as skilled or semi-skilled workers. However, some of their number, by a somewhat inefficient route, eventually are trained as technicians. There are plans to create two new "Technical" secondary schools, and this underlines the point that the government does not seem to have an appropriate training strategy for the different skills for which the economy has a demand. Centres for the training and education of adult Bahrainis would seem a more useful investment than more "Technical" secondary schools.

Enrolments in "General" secondary and particularly in the "Science" specialism, absorb an increasing share of all secondary education. It is thought that this is principally a result of the easier access to Government scholarships for University study abroad from there, combined with a desire to benefit from the high salaries paid to University graduates in government employment. There is reason to believe that the swollen ranks of "General" secondary schools absorb a disproportionate share of educational resources, given the available jobs on the island for which those graduates would qualify.

PART III.QATAR.Introduction.

Despite Qatar's very brief experience of modern education, she appears to be making significant attempts to accomplish her educational aims, which are complementary to her economic development. However, there are so very few Qataris that, given the diversity of her educational aims, some contradiction is inevitable. The creation of a "skilled industrial class" is hardly compatible with "self-sufficiency in teachers", and this underlines the most serious problem which Qatari educationalists face when attempting to set priorities for educational development. Qatar's long-run aims of economic development imply that every pupil should be orientated to a "technical" or "scientific" type of training. However, Qatar also clearly requires a cadre of her own teachers. Moreover, to add to their difficulties, there are signs that educationalists in Qatar have as little control over the career choice of pupils as do educationalists in Kuwait, since in the end, these choices are determined largely by the relative rewards for different jobs.

6.7. Aims of the educational system and training institutions.

Qatar's educational aims are similar to those of Kuwait. However, Qatar has experienced education for a shorter length of time and her aims are less complex. They are as follows:

a) Universal education.

The "provision of education for every citizen",⁶⁶ at no cost to the individual is an aim which implies that all children of school age should enrol in schools. The "Primary level" is one that "most deeply embodies the long term aims of the government"⁶⁷ in educating all her citizens.

b) Educational standards.

The Ministry of Education has stated a desire to "raise the level of education generally".⁶⁸

c) Self-sufficiency in teachers.

The government is determined to achieve "national self-sufficiency in teachers in the long term".⁶⁹ To this end, a new Teacher Training College has been built.

d) The creation of a "skilled industrial class".

Education should "ensure the emergence of a skilled industrial class".⁷⁰ Presumably education assisted by training will achieve this rather than education alone.

6.8. Operation of the educational system and training institutions.

Officially 1956 is the year that education was first organised and provided by the government.⁷¹ There clearly were some modern schools in Qatar before that time, as the Ministry of Education records show that in 1956, 1,388 boys occupied 17 Primary schools.⁷² It seems that there were no schools before that time above the Primary level.

In 1957 two girls' Primary schools opened, and in 1959 a Preparatory school for girls began to enrol students.⁷³ In Qatar, six years of Primary education are followed by three years Preparatory, which in turn is followed by three years of Secondary education. In 1973/74 a Teacher Training College was added, which accepts graduates of the Secondary schools.

In 1956 there were 55 boys enrolled in the Preparatory stage, and 18 of these were in the Technical Preparatory school.⁷⁴ 1961 saw the opening of the Secondary level to boys, and initially pupils were exclusively enrolled at that level in order to become teachers. 1964 saw the admission of girls to the Secondary level;⁷⁵ by that time there were 154 boys in General Secondary, 32 in the boys' training institute, and 108 in the Technical school. In 1968 girls were first trained at Secondary level as teachers.

The pattern of the development of education in Qatar was that a level or type of training was extended to boys, and after two or three years the same facility was provided for girls. Overall, there were fewer girls than boys at school, as Table 6.28 shows. In 1968/69 boys outnumbered girls in school by 3 to 2, overall, and by 3 to 1 in the Secondary level. By 1973/74 a more even number of both sexes are found in school, especially in the Primary and Preparatory levels. In the Secondary level, the girls almost achieve parity with boys if those options to which girls are not admitted are excluded, namely Technical,

Commercial and Religious Education. It is interesting to note that in the Teacher Training branch of Secondary education, girls outnumber boys by 4 to 1.

TABLE 6.28. ENROLMENT OF PUPILS IN QATAR'S SCHOOLS BY LEVEL AND SEX, 1968/69 AND 1973/74.

	<u>1968/69</u>			<u>1973/74</u>		
	<u>Boys</u>	<u>Girls</u>	<u>Total</u>	<u>Boys</u>	<u>Girls</u>	<u>Total</u>
Primary	7148	5472	12620	10528	9618	20146
Preparatory	1499	472	1971	2529	2241	4770
<u>Secondary</u>						
General	433	197	630	1399	816	2215
Technical	73		73	105	-	105
Commercial	76		76	85	-	85
Religious	49		49	175	-	175
Teacher Training	93	38	131	64	243	307
Totals	9371	6179	15550	14885	12918	27803

Source: Ministry of Education, Qatar, Annual Report, 1968/69, Statistics Section (Arabic). Ministry of Education, Qatar, Examination Results, 1973/74, Statistical Office, p.3. (Arabic).

Successful students in the system pass through the first two levels, and then the boys may choose between five branches of Secondary education: General, Technical, Commercial, Religious or Teacher Training. To a certain extent, some of them have committed themselves to one type by previously enrolling in the equivalent at the Preparatory level. For example, the Preparatory Religious and Technical schools normally direct graduates to the equivalent Secondary schools. Most boys opt for "General" secondary, as Table 6.28 shows. For girls, the choice of secondary is between the Teacher Training Institute and the "General" option. Again, most choose "General" secondary, but a significant number choose the Teacher Training option.

After the Secondary stage, the most able boys may qualify for a scholarship to read a University degree abroad. In 1973/74, 452 Qatari boys and 26 girls were studying for first degrees abroad, and 19 boys were studying for higher degrees, as shown by Table 6.29.

TABLE 6.29. QATARIS STUDYING ABROAD, BY TYPE OF TRAINING AND SEX, 1973/74.

	<u>Men</u>	<u>Women</u>
1st Degree	452	26
Higher Degree	19	2
Intermediate Studies	10	-
Training	32	-
Special Education	20	6
Total	553	34

Source: Ministry of Education, Qatar, Higher Studies Section, Students Studying Abroad, Table 2, 1973/74 (Arabic).

All the girls stidying abroad and 61% of the boys do so in the Middle East.⁷⁶ It is thought that it is easier for a boy to pursue his studies abroad than for a girl, as many parents are unwilling for their daughters to leave the country.

The alternative to studying abroad after secondary school is the new Higher Teacher Training Colleges. These two colleges give a four year training period, with three alternative specialisms, English, Literature and Science. Enrolment by sex and course option is shown on Table 6.30 for the first enrolment to the college, and the Literature option is by far the most popular. Overall, girls outnumber boys by 2 to 1, and this has a significance for the supply of teachers.

School drop outs may enrol in the Vocational Training Centre, where a two to three year training is provided for manual occupations. The enrolment in 1975 was 269 Qataris and 151 non-Qataris from the Lower Gulf.⁷⁷

Allowances are paid for secondary school attendance and for certain types of preparatory and vocational training. The allowances are designed to encourage attendance, particularly in vocationally oriented schools, such as the Commercial School and the Technical School. In order that the allowances paid to students at the Vocational Training Centre should not draw students away from the Technical School, where

the courses are very similar, the Ministry of Education has set the same rates for each institution.⁷⁸

The Ministry of Education in Qatar has accepted the responsibility for the education of some non-Qatari children living in Qatar. Their share in the Primary level is 29%, as Table 6.30 shows and in the Secondary level it is almost 40%.

TABLE 6.30. THE SHARE OF EACH TYPE OF PUPIL IN SCHOOLS IN QATAR, BY LEVEL, SEX AND NATIONALITY IN 1973/74.

	<u>QATARI</u>		<u>NON-QATARI</u>		<u>Total (%)</u>
	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>	
Primary	36.8	34.7	15.8	12.7	100.0
Preparatory	38.6	34.6	16.2	10.6	100.0
Secondary	39.6	20.5	25.4	14.5	100.0

Source: Ministry of Education, Qatar, Annual Report 1973/74, p.131 (Arabic).

Qatar, like Kuwait, has relied upon a considerable number of expatriate teachers for her schools. Table 6.31 shows that in 1970/71 Qatari male teachers accounted for 28.7% of all teachers in the Primary level, and 4.1% of all Preparatory and Secondary teachers. Qatari women teachers in 1970/71 accounted for an even smaller proportion of all Primary school teachers, 15%, and only 0.9% of all teachers in the Preparatory and Secondary level. To some extent this reflects the fact that the womens' Teacher Training Institute opened seven years after the male Institute.

TABLE 6.31. THE NUMBER OF TEACHERS IN THE PRIMARY LEVEL AND IN THE PREPARATORY AND SECONDARY LEVELS, AND THE SHARE OF QATARIS TEACHERS BY SEX, 1970/71 AND 1973/74.

	<u>PRIMARY</u>		<u>PREPARATORY AND SECONDARY</u>	
	<u>1970/71</u>	<u>1973/74</u>	<u>1970/71</u>	<u>1973/74.</u>
Total number of male teachers	407	428	219	336
Qatari share of total	28.7	38.1	4.1	7.5
Total number of female teachers	345	498	102	207
Qatari share of total	15.0	36.8	0.9	0.9

Source: Ministry of Education, Qatar, Annual Report 1970/71, Statistics Section (Arabic).
Ministry of Education, Qatar, Annual Report 1973/74, p.138, Statistics Section (Arabic).

6.9. An evaluation of the investment in human resources.

a) Universal enrolment in schools of school aged children.

Table 6.32 shows the percentages of boys and girls aged "5-9" and "10-14" in school of the total number of children that age. If Qatar is to enrol all school children in school, then the "5-9" population should be almost entirely in school. Table 6.32 shows that about 70% of all boys and 61% of girls of the Qatari population aged "5-9" are in school. Clearly, a large number of Qatari children are not in school; moreover, the tradition prejudice against sending girls to school exists in Qatar as well as in the other states we have considered, as the differential in these figures shows. It is thought that the majority of "unschooled" Qatari children are located in the more remote parts of Qatar.

TABLE 6.32. THE PERCENTAGE AND NUMBER OF QATARI CHILDREN AGED "5-9" AND "10-14" IN SCHOOL OF THE TOTAL SCHOOL AGE POPULATION, BY SEX, IN 1970/71.

Age Cohort:	<u>"5-9"</u>	<u>"10-14"</u>	<u>"5-9"</u> (% in school).	<u>"10-14"</u>
Boys in school ⁽¹⁾	2705	2199	66.9	67.2
Total population ⁽²⁾	4042	3272		
Girls in school ⁽¹⁾	2592	2215	61.3	72.0
Total population ⁽²⁾	4223	3037		

Source: (1) Ministry of Education, Qatar, Annual Report 1970/71, Statistics Section (Arabic).
(2) 1971 Census, Qatar, Table 10.

b) The Standard of Education.

Measured by "examination performance" the standard of education appears slightly higher than in Kuwait or Bahrain. Table 6.33 shows that in each level Qatari girls perform better than their male counterparts. The latter group generally perform less well than non-Qataris. This is a similar pattern of performance to that noticed in Kuwait. There is evidence that in some cases, Qatari men perform

very poorly; Table 6.34 gives an example of this for the Teacher Training Institute, where in the first stage, 47% of all Qatari men failed this examination compared to only 23% of Qatari women.

TABLE 6.33. THE PROPORTION OF PUPILS PASSING EXAMINATIONS IN 1973/74, BY LEVEL, SEX AND NATIONALITY.

	BOYS		GIRLS	
	Qatari (%)	Non-Qatari (%)	Qatari (%)	Non-Qatari (%)
Primary	81	79	94	98
Preparatory	75	92	92	96
Secondary (Science)	73	82	100	89
Secondary (Arts)	77	68	88	77

Source: Ministry of Education, Qatar, Examination Results for 1973/74, Statistical Department (Arabic).

TABLE 6.34. THE NUMBER OF PUPILS IN EACH STAGE AND THE PERCENTAGE PASSING EXAMINATIONS BY SEX AND STAGE, 1973/74.

	<u>Boys.</u>	<u>Girls.</u>
1st Stage Number	47	111
% passed	53%	77%
2nd Stage Number	21	68
% passed	76%	74%
3rd Stage Number	30	42
% passed	100%	100%
Total	98	220
Average Pass Rate.	72%	81%

Source: Ministry of Education, Qatar, Examination Results for 1973/74, Statistical Department (Arabic).

"Pass rates" are a very poor way of measuring quality in education. However, they represent the only tangible evidence available on the topic. If Qatari students are studying for University degrees in other countries and obtaining them, then that is an indication that the standard of education of Qatari secondary students must be comparable to that found in other Middle Eastern countries. The assessment of the staff of the new Higher Teacher Training Colleges was that the graduates they dealt with were of moderate ability.⁷⁹ It seems inevitable at

this early stage in the development of Qatar's education that there are considerable variations in standards within the system.

c) Self Sufficiency in Teachers.

Table 6.31 shows that in 1973/74 Qatar relied on expatriate teachers to fill the large majority of all teaching posts, and that there are few Qatari teachers above the Primary level. Between 1970/71 and 1973/74 the share of Qatari teachers in boys schools rose from 28.7% to 38.1%, and in girls schools from 15.0% to 36.8%.

It is relatively easy to explain why there are so few Qatari teachers, even in 1973/74. The supply of teachers up till 1976 is limited to graduates of the Secondary Teacher Training Institute and to Qatari graduates of foreign universities.

Table 6.35 shows that a relatively small number of graduates have emerged from the Secondary Teacher Training Institute, and the first women graduates only appeared in 1970. Since that time the number of women graduates has steadily risen, and by 1972 outnumbered the male graduates. Table 6.34 shows that currently twice as many girls as boys are enrolled in the Training Institute, and by 1975 three times as many girls will graduate as boys. The graduates of this institution are only qualified to teach in the Primary level, hence the increase in the number of Qatari teachers in that level between 1970/71 and 1973/74.

TABLE 6.35. QATARI GRADUATES FROM THE SECONDARY LEVEL TEACHER TRAINING INSTITUTE, 1966 TO 1974.

<u>Year.</u>	<u>Boys.</u>	<u>Girls.</u>
1966	16	
1967	-	
1968	14	
1969	16	
1970	21	15
1971	38	20
1972	34	41
1973	39	50
1974	30	44

Source: Ministry of Education, Qatar, Annual Report 1973/74, p.110 (Arabic).

Previously, teachers for the Preparatory and Secondary levels have been trained in foreign universities. It is thought that a Qatari graduate of a foreign university is unlikely to wish to become a teacher when the employment opportunities in the government or in a large company are so much greater. This view is confirmed by the very small rise in the number of Qatari Preparatory and Secondary teachers between 1970/71 and 1973/74. The future supply of Preparatory and Secondary teachers is found in Higher Teacher Training Colleges. The pattern which the first year's enrolment suggests is that many more girls than boys plan to become teachers, as Table 6.33 showed. Table 6.34 also suggests that girls see teaching as a career more readily than boys at the Secondary level.

The total enrolment in Qatar's schools is steadily increasing. While Qatar previously did not have adequate training facilities to train all the teachers she required, she now has. There are signs that many Qatari women are enrolling for teacher training at both training levels. However, fewer men are enrolling than women, and it is thought that Qatar will rely on expatriate male teachers for several years, if not decades, to come.

d) The creation of a skilled industrial class.

Technical Training in Qatar is given by the Ministry of Education in the Technical School. This school has an equivalent in the Preparatory level and most students graduate from there to the Secondary Technical School. Students may study in the conventional specialisms of technical schools.⁸⁰ To a certain extent the Technical School duplicates the work of the Vocational Training Centre. The Technical School's share of all enrolment is very small; in 1973/74 only 5.7%. Table 6.36 shows the number of final year students in Technical education since it commenced in the Secondary level. It is evident that the number of final year students is gradually falling.

TABLE 6.36. THE NUMBER OF FINAL STAGE STUDENTS IN THE SECONDARY TECHNICAL SCHOOL, 1966/67 TO 1973/74.

<u>Year.</u>	<u>Number of Students.</u>
1966/67	9
1967/68	8
1968/69	17
1969/70	25
1970/71	26
1971/72	22
1972/73	12
1973/74	13

Source: Ministry of Education, Qatar, Annual Report 1973/74, p.11 (Arabic).

The Vocational Training Centre accepts students with Primary School certificates. It was set up as the response to an estimation of Qatar's future need for skilled manual workers, and is run with I.L.O. assistance.⁸¹ There are six training areas, these are - Mechanical; Electrical; Building; Engineering; Clerical and 'Special Courses'. Training lasts for two to three years and is organised on a modular basis.⁸² The modules are designed to correspond closely to particular jobs found in Qatar. Students who attend the Vocational Training Centre are given remuneration at the same rate as those at the Technical school, namely £35 per month.⁸³ In addition to the normal courses the Centre runs several courses designed to train Qataris for particular functions. In 1974 there were 21 Qataris enrolled in a Distillation Plant Course and 21 in a Power Station Course. Eight are enrolled in a training course for employees of the Qatar Fertilizer Company; in all 269 Qataris were enrolled in 1971 including those in the special courses.

The view of the Director of the Centre was that almost all graduates entered government employment, and that some Qatari graduates are replacing non-Qataris.⁸⁴ This seems surprising when total employment is expanding at its present rate in Qatar. The employability of graduates of the Centre and the Technical School is a topic on which there are very little relevant data. The combined efforts of the Technical School and

the Vocational Training Centre seem to be making a small but significant contribution to creating a "skilled industrial class".

e) Conclusion.

- i) Given the comparatively brief period that Qatar has been able to provide primary education for all who wish it, an enrolment ratio of more than 0.6 is respectable, particularly when Qatar's scattered distribution of her population over a large peninsula is remembered.
- ii) By Qatar's own standards, the quality of education seems reasonably good, especially amongst girls. At particular points in the educational system, the boys appear to perform in a less than satisfactory way. This may be because there are more boys in school than girls, and the alternatives outside the school system are sufficiently attractive to act occasionally as a disincentive to study. It seems rather premature to pronounce on the quality of education in Qatar, but the signs so far are encouraging.
- x iii) While it appears reasonably likely that Qatar may be self sufficient in female teachers in ten years or so at the Primary level, she seems very unlikely to be self sufficient in male teachers in the Preparatory and Secondary levels for the next twenty years. The current pattern of x enrolment in the two Teacher Training Institutions suggests that Qatari men prefer alternative careers to teaching at this time.
- iv) It is difficult to assess the progress that the Vocational Training Centre and the Technical School are making towards the creation of a "skilled industrial class". Two points are clear though: (a) the current enrolment of these two institutions represents 8.5% of the Preparatory and Secondary School boys' enrolment; (b) the approach that the Vocational Training Centre is taking of training pupils for a particular job without reference to a particular set of examinations that are more relevant to a different environment seems a step in the

right direction. Possibly a still more useful approach would be to take Qataris already employed and train them to a specific skill level. However, the Qatari workforce is very small, and the major source of skilled Qatari manual labour must, for many years to come, be the young Qataris.

For several years Qatar has successfully operated a system of incentive payments to encourage students to study in the fields which the Ministry of Education regards as important. This system operates on the basis of relative payments, slightly higher ones going to the area of training deemed most necessary to the stage. The maintenance and development of this system of incentive payments would appear to be worthwhile. Its corollary after school would be a pay policy which rewarded most highly those jobs which are of most social importance.

PART IV.CONCLUSION.

Educationalists in each of our three countries have established aims of education which, broadly speaking, will assist the proposed economic development. When making decisions relating to investment in themselves, Kuwaitis tend to maximise their income. Government employment is the most remunerative, and is open to every Kuwaiti. However, the government salaries for different types of jobs do not correspond to educational aims, nor those of economic development. As a result, much of the investment in human resources in Kuwait is either wasted, or yields a very low return.

The government of Bahrain does not have the same "open door" employment policy for nationals as that of Kuwait. The educational system, considerably older than Kuwait's or Qatar's, has tended to adapt to signals from the labour market over the years. At the moment Bahrain's attempts to diversify her economy have created a slightly different requirement of labour, in particular, for more "industrially orientated" graduates. Bahrainis, much poorer than Kuwaitis, are possibly more responsive to market signals than Kuwaitis, and the excess demand for industrial workers will eventually influence student choice. At the moment, the majority of Secondary school pupils enrol in "General" Secondary, which is not an ideal training for industrial employment. Another weakness of Bahrain's investment in human resources is that there appears to be an inadequate training strategy for certain types of occupations, particularly "blue collar" workers. To enhance the return to investment in human resources, Bahrain should consider making educational changes in some aspects of her training strategy.

Qatar's period of investment in human resources is too brief to warrant a conclusion on its effectiveness. But as Qatar resembles

Kuwait more than Bahrain, she would profit by a consideration of the influence of an employment policy for nationals on her investment in the same. In particular, when devising an employment policy, the pay of nationals should be set to reinforce educational aims, and those of her economic development. If this is not done, the return to her investment in human resources will be radically diminished.

TABLE 6.37. TOTAL ENROLMENT IN THE PRIMARY STAGE BY YEAR, WITH SUCCESS RATES, 1963/64 TO 1970/71.

	1963/64.	1964/65.	1965/66.	1966/67.	1967/68.	1968/69.	1969/70.	1970/71.
First Year:								
Enrolment	12436	13334	13724	13488	13676	13285	13283	14373
% Successful	78	85	85	86	85	86	87	87
Second Year:								
Enrolment	10047	11837	13107	13659	13492	13379	13455	13968
% Successful	78	87	84	87	86	86	86	86
Third Year:								
Enrolment	8802	10265	12350	13331	14032	13990	14126	14968
% Successful	72	82	81	84	82	81	80	80
Fourth Year:								
Enrolment	7114	8089	9628	11227	12483	13249	13090	13529
% Successful	73	85	86	88	85	85	85	85
Total Enrolment	38399	43525	48809	51705	53683	53903	53950	56384

Source: Ministry of Education, Kuwait, Annual Yearbook 1970/71, p.33 (Arabic).

TABLE 6.38. REPEATERS BY YEAR AND BY PERCENTAGE OF TOTALS, 1963/64 TO 1970/71.

	1963/64.	1964/65.	1965/66.	1966/67.	1967/68.	1968/69.	1969/70.	1970/71.
1st yr. repeaters	2700	2006	2056	2047	2229	2006	1850	1925
% of enrolment	23	15	15	14	15	13	12	12
2nd yr. repeaters	4875	1560	2006	1818	1930	1953	1874	2001
% of enrolment	22	13	15	13	14	14	13	14
3rd yr. repeaters	2175	1898	1035	2152	2543	2679	2894	3015
% of enrolment	28	18	18	18	28	19	20	20
4th yr. repeaters	1857	1150	1295	1355	1867	1869	2026	2021
% of enrolment	27	15	13	11	15	15	15	14
Total Repeaters	11607	6644	6395	7372	8571	8507	8644	8962
% of total enrolment	30.2	15.2	13.1	14.2	15.9	15.7	16.0	15.7

Source: Compiled from Table 6.38.

TABLE 6.3.9. TOTAL ENROLMENT BY YEAR AND LEVEL FOR INTERMEDIATE STUDENTS, 1963/64 TO 1970/71.

	<u>1963/64.</u>	<u>1964/65.</u>	<u>1965/66.</u>	<u>1966/67.</u>	<u>1967/68.</u>	<u>1968/69.</u>	<u>1969/70.</u>	<u>1970/71.</u>
Year 1	6158	7058	8664	9992	11539	12856	13872	14631
Year 2	4329	5208	6165	7573	5999	10670	11753	12322
Year 3	3054	3869	4962	4477	6876	8213	9603	10670
Year 4	2526	2540	3463	4401	5430	6929	7351	8903

Source: Ministry of Education, Annual Yearbook 1970/71 (Arabic), p.36.

TABLE 6.40. TOTAL ENROLMENT AND FAILURE RATE OF ALL PUPILS IN THE INTERMEDIATE STAGE, 1963/64 TO 1970/71.

	<u>1963/64.</u>	<u>1964/65.</u>	<u>1965/66.</u>	<u>1966/67.</u>	<u>1967/68.</u>	<u>1968/69.</u>	<u>1969/70.</u>	<u>1970/71.</u>	<u>1971/72.</u>	<u>1972/73.</u>
Total enrolment	16067	18675	22254	27586	32844	38668	42579	46526	49965	52399
% failed in exams	31.6	19.7	17.7	14.6	21.0	20.6	24.0	25.7		

Source:- 1963/64. to 1970/71 abstracted from: Ministry of Education, Annual Yearbook 1970/71, (Arabic), p.38.
1971/72 from Ministry of Education, "Statistics of Nationalities of Students by Levels, 1971/72", (Arabic), p.2.
Research Control and Technical Coordination, Statistical Department.
1972/73., Ibid., 1972/73 (Arabic).

Note: Pass/Failure rates are unavailable at this level for 1971/72 or 1972/73.

TABLE 6.41. TOTAL ENROLMENT OF SECONDARY SCHOOLS BY CLASS & STAGE, 1963/64 TO 1970/71.

<u>Grade:</u>	<u>1963/64.</u>	<u>1964/65.</u>	<u>1965/66.</u>	<u>1966/67.</u>	<u>1967/68.</u>	<u>1968/69.</u>	<u>1969/70.</u>	<u>1970/71.</u>
1st	1397	1720	2280	2487	3217	3669	5169	5620
2nd	996	1258	1863	1749	2230	2881	3411	4605
3rd Literature	291	405	685	666	765	905	997	1258
3rd Science	547	552	851	883	964	1387	1645	1873
4th Literature	290	314	508	565	688	799	893	1004
4th Science	500	563	674	563	760	942	1308	1637
Total	4021	4812	6762	6913	8729	10583	13316	15903

Source: Ministry of Education, Annual Yearbook 1970/71, p.39 & 40., (Arabic)

TABLE 6.42. PASS RATES BY GRADE FOR 1968/69 TO
1970/71 BY SEX AND NATIONALITY.

		<u>1968/69.</u>	<u>1969/70.</u>	<u>1970/71.</u>
1st grade:	Kuwaiti men	76.6	77.6	81.0
	Non-Kuwaiti men	83.5	83.1	86.0
	Kuwaiti women	89.0	88.7	82.0
	Non-Kuwaiti women	92.9	91.0	80.0
2nd grade:	Kuwaiti men	75.0	83.6	83.0
	Non-Kuwaiti men	81.8	84.8	85.4
	Kuwaiti women	92.0	87.0	84.0
	Non-Kuwaiti women	93.9	93.0	93.0
3rd grade:	Kuwaiti men	91.0	89.0	92.0
(Literature)	Non-Kuwaiti men	91.7	93.0	97.0
	Kuwaiti women	96.0	97.0	93.0
	Non-Kuwaiti women	93.9	98.0	95.0
3rd grade:	Kuwaiti men	80.8	83.9	81.0
(Science)	Non-Kuwaiti men	82.9	92.4	87.1
	Kuwaiti women	93.6	95.0	93.0
	Non-Kuwaiti women	95.0	96.0	90.0
4th grade:	Kuwaiti men	87.5	75.0	73.0
(Literature)	Non-Kuwaiti men	87.7	81.9	76.0
	Kuwaiti women	95.1	91.3	81.0
	Non-Kuwaiti women	89.0	92.0	82.0
4th grade:	Kuwaiti men	72.3	71.1	72.0
(Science)	Non-Kuwaiti men	87.7	81.9	76.0
	Kuwaiti women	81.0	88.5	88.0
	Non-Kuwaiti women	86.8	81.0	85.0

Source: 1968, Ministry of Education, Annual Yearbook 1968/69, p.76 & 77.
(Arabic).
1969, Ibid., 1969/70, p.68 & 70.
1970, Ibid., 1970/71, p.41 & 42.

TABLE 6.4'3. TOTAL ENROLMENT BY YEAR AND SPECIALISATION IN THE TECHNICAL SCHOOL, 1954/55 TO 1967/68.

Specialisation:	1954/55.	1955/56.	1956/57.	1957/58.	1958/59.	1959/60.	1960/61.	1961/62.	1962/63.	1963/64.	1964/65.	1965/66.	1966/67.	1967/68.	Total.
Fitter	-	3	3	10	17	22	24	22	24	25)	86	5	-)	129	552
Turning	-	6	14	16	25	.27	23	21	20	24)		6	-)		
Architecture & Surveying	-	-	-	-	-	-	-	-	-	-	5	9	21	36	66
Blacksmith & Welding	-	-	4	7	7	11	8	7	9	6	15	9	4	9	96
Plastics Operations	-	-	-	-	-	-	-	-	-	-	-	76	78	0	154
Casting	-	-	7	8	11	12	10	9	14	10	16	18	7	12	134
Pattern Makers	-	-	4	7	6	8	3	2	7	5	5	5	-	2	54
Fine Measuring Instruments	-	-	-	-	-	-	-	-	-	-	-	-	-	11	11
Automobiles	-	20	14	29	35	32	33	23	40	87	112	126	139	192	882
Refrigeration & Cooling	-	-	-	-	-	-	-	-	-	28	59	75	80	119	361
Electricity	-	11	15	23	30	31	33	43	43	97	115	132	154	221	918
Wireless Communications	-	10	18	23	26	27	32	43	50	101	136	163	130	191	951
Sheet Metal Works & Sanitary works	-	3	4	7	5	3	2	-	-	-	-	-	-	-	24
Carpentry	-	-	-	7	8	9	5	2	2	9	8	-	-	-	50
Enforced Concrete	-	-	-	-	-	-	0	14	19	16	6	5	-	-	69
Furniture Works	8	7	20	20	16	13	11	10	13	21	45	32	31	55	303
Total	8	60	103	157	186	193	193	196	242	429	603	661	614	977	4655
No. of Specialisations	1	7	10	11	11	11	12	11	11	12	11	11	10	11	

Source: Information supplied by Osman Mardem Bey, Ministry of Commerce and Industry, March 1974.

TABLE 6. ALL TOTAL NUMBERS AND RELATIVE SHARES OF KUWAITIS AND NON-KUWAITI TEACHERS BY LEVEL, 1963/64 TO 1974/75.

Level:	63/64.	64/65.	65/66.	66/67.	67/68.	68/69.	69/70.	70/71.	71/72.	72/73.	73/74.	74/75.
<u>Kindergarten.</u>												
No. of teachers	367	395	477	454	564	620	677	789	834	882	971	998
No. of Kuwaiti teachers	39	48	43	33	26	23	23	78	206	316	400	443
%	10.6	12.1	9.0	7.2	4.6	3.7	3.4	9.9	24.7	35.8	41.2	56.0
No. of Non-Kuwaiti teachers	328	347	434	421	538	597	654	711	628	566	571	555
%	89.4	87.9	91.0	92.8	95.4	96.3	96.6	90.1	75.3	64.2	58.8	44.0
<u>Primary.</u>												
No. of teachers	1933	1965	2316	2390	2425	2577	2789	2813	3305	3753	4164	4599
No. of Kuwaiti teachers	80	109	124	367	539	879	1230	1586	1974	2227	2583	2650
%	4.1	5.5	5.3	15.3	22.2	34.1	44.1	56.3	59.7	59.3	62.0	57.6
No. of Non-Kuwaiti teachers	1853	1856	2192	2023	1866	1698	1559	1227	1331	1526	1581	1949
%	95.9	94.5	94.7	84.7	77.3	65.8	55.9	43.7	40.3	40.6	38.0	42.4
<u>Intermediate.</u>												
No. of teachers	719	1125	1284	1627	1987	2378	2689	2993	3364	3677	3909	4181
No. of Kuwaiti teachers	13	13	11	19	28	35	73	303	547	779	967	1033
%	1.8	1.2	0.86	1.1	1.4	1.4	2.7	10.1	16.3	21.1	24.8	44.7
No. of Non-Kuwaiti teachers	706	1112	1273	1608	1959	2343	2616	2690	2817	2898	2942	3148
%	98.2	98.8	99.14	98.9	98.6	98.6	97.3	89.9	83.7	78.8	75.2	75.3
<u>Secondary.</u>												
No. of teachers	309	378	499	615	752	939	1176	1521	1872	2261	2642	2965
No. of Kuwaiti teachers	11	10	9	18	46	83	121	199	246	288	290	293
%	3.6	2.6	1.9	2.9	6.1	8.8	10.3	13.0	13.1	12.7	11.0	9.8
No. of Non-Kuwaiti teachers	298	368	490	597	706	856	1055	1322	1626	1973	2352	2672
%	96.4	97.4	98.2	97.1	93.9	91.2	89.7	87.0	86.9	87.3	89.0	90.2

Source:-

- 1963/64: Planning Board, Statistical Abstract, 1964, p.36.
- 1964/65: Planning Board, Statistical Abstract, 1965, p.45.
- 1965/66: Planning Board, Statistical Abstract, 1966, p.53.
- 1966/67: Planning Board, Statistical Abstract, 1967, p.41.
- 1967/68: Planning Board, Statistical Abstract, 1968, Table 33, p.56.
- 1968/69: Ministry of Education, Annual Yearbook, 1968/69, p.172 (Arabic).
- 1969/70: Ministry of Education, Annual Yearbook, 1969/70, p.160 (Arabic).
- 1970/71: Ministry of Education, Annual Yearbook, 1970/71, p.112 (Arabic).
- 1971/72
- to 1974/75:

Ministry of Education, Statistics of Nationalities of Administrators and Teaching Staff for the Academic Year 1971/72; 1972/73; 1973/74 and 1974/75. Research Control and Technical Coordination Office, p.1. (Arabic).

TABLE 6.45. SUMMARY TABLE OF VOCATIONAL TRAINING INSTITUTIONS OPERATING IN KUWAIT IN 1975.

<u>Institution.</u>	<u>Agricultural Institute.</u>	<u>Civil Aviation Training Centre.</u>	<u>Firefighting School.</u>	<u>Applied Engineering Institute.</u>	<u>Telecommunications Institute.</u>	<u>Shuwaikh Training Centre.</u>	<u>Water Resources Development Centre.</u>
<u>Type of Training:</u>	Agricultural and Veterinary technicians.	Technicians.	General Firefighters. Specialist Firefighters. Aviation Firefighters.	Technicians, and Assistant Technicians for building trade.	Technicians and Assistant Technician, and Traffic and Special courses for women.	Accelerated Training. Instructor Training. Upgraded and supervisory training.	Assistant Technician.
<u>Duration of training:</u>	Two years.	One to two years.	One year.	One to two years.	One to two years.	Six months to two years.	One year.
<u>Entry Requirements:</u>	Secondary School Certificate.	General or Technical Secondary School Certificate.	Six Years' Education.	Secondary or Intermediate Certificate.	Secondary or Intermediate Certificate.	Six years' education or an Internal Qualification	Intermediate Certificate.
<u>Emolument:</u>	K.D. 60 per month.	K.D. 60 per month.		K.D. 80 per month.	K.D. 60 - 80 per month.	K.D. 60 per month.	K.D. 40 per month.
<u>Enrolment:</u>	1975 - 22.	1973 - 25.	1974 - 80.	As of March 1973 - 57.	As of August 1974 - Traffic: 109 Assistant Technicians: 101 Technicians: 37	As of November 1974 : Accelerated Training - 153. Upgrading - 16 Instructor - 11.	As of August 1974 - 86.
<u>Graduates:</u>	Up to 1971/72 - 25.	Up to 1971/72 - 73.	Up to 1971/72 - 126.	As of March 1973 - 81.	Up to 1971/72 - 659.	Up to 1971/72. Preparatory Course - 356. Upgrading - 64. Craftsman Accelerated Course - 112.	As of August 1974 - 250.
<u>Civil Service Grade after Graduation:</u>	5	5	-	5	5	Variable	6 - 7.

Note: (1). All entrants are Kuwaiti males, except where stated.

(2). Where an Institute offers two alternative qualifications, the duration of the course, the stipend, and the entry requirement are correspondingly different.

Source: The Institute and Centre of Vocational Training, Planning Board, 27/6/73 (Arabic).

Cultural Board of Occupational Training, January 1974 (Arabic).

Mainpower and Training in the Government, Mixed Sector, and Petroleum Institute.

Shuwaikh Industrial Training Centre, Ministry of Social Affairs and Labour, Kuwait, October 1971.

Shuwaikh Industrial Training Centre, Progress Report, I.L.O., January 1975.

Description of the U.N.D.P./assisted Projects and Projects financed under Funds-in-Trust, Kuwait, U.N.D.P., n.d.,

Education Profile : Kuwait, British Council, pp. 20-21.

Societat, J., An Inventory and Assessment of Employment Orientated Human Resources Development Programs in the Gulf Area, Manama, Bahrain, February 1975.

Personal interviews with members of Institutions and Centres' staff.

References.

1. Ministry of Education, Kuwait's Educational Policy for the Coming Years to 1980, II.1., n.d.
2. Ministry of Education, Objectives of the Adopted Plan of the General Policy in the Coming Years to 1980, Pt.II, n.d.
3. Ministry of Education, The Policy of Preparing and Training Teachers, Pt.I., n.d.
4. Ministry of Education, Objectives of the Adopted Plan, op.cit., Pt.6.
5. Ministry of Education, Educational Development Throughout the Last Five Years (1968-1972), 'Scopes and Aims', No.4., Research Control and Technical Coordination, October 1972.
6. See, Tibawi, A.L., Islamic Education, Heinemann, 1970, for a fuller account of the development of education in Kuwait.
7. See, Ali Al-Kuwari, Ph.D. Thesis, Durham University, op.cit., 1974.
for a comprehensive account of the development and eventual collapse of the pearling industry in Kuwait and the Arabian Gulf.
8. Annual Report 1968/69, Ministry of Education, p.11 (Arabic).
9. The first shipment of Kuwaiti crude oil occurred in June 1946.
See: Ministry of Finance and Oil, The Oil of Kuwait, p.17, 1970.
10. Ministry of Education, General Statistics 1974/75, Research Control and Technical Coordination Department, Statistical Office, Table 1 (Arabic).
11. The British Council, Education Profile : Kuwait, Kuwait University, 1974, p.17.
12. Kuwait University, Statistics 1973/74, 1974/75.
13. Ministry of Education, Statistics of Students by Nationality and Schools, 1974/75. Research Control and Technical Coordination Department, Table 1 (Arabic).
14. Planning Board, Statistics of Government Employees, February 1972, Table 1, p.8. (Arabic).
15. Ministry of Education, Annual Report 1972/73, p.9. (Arabic).

16. Ministry of Education, Some of the Problems that Faced the Development of Culture and Educational Policy during the Last Five Years, Pt. II, November 1972.
17. Ministry of Education, Annual Report 1968/69, p.143 (Arabic).
18. Ministry of Education, Some of the Problems That Faced the Development of Culture and Educational Policy During the Last Five Years, Pt. II, "In respect of finding the building and school utilities".
19. A brief account of the early method of training teachers in Kuwait, and the subsequent reforms is found in: Ministry of Education, The Development of Culture and Education in Kuwait Throughout the last Five Years, 1968-1972, November 1972, Pt.4.
20. Ibid., Pt.I, p.3.
21. For details of the operation and development of the Technical School, see: Drysdale, K.D., Unesco Mission, Kuwait, Annual Report, 1972.
22. Socknat, J., An Inventory and Assessment of Employment Orientated Human Resource Development Programs in the Gulf Area, Bahrain, 1975, p.2. of Appendix 18.
23. Drysdale, K., op.cit., 1972, p.67.
24. Personal communication with the Director of the School, March 1974.
25. Ministry of Education, The Development of the Preparation of the Teacher in the State of Kuwait Within the Last Few Years, November 1972.
26. Ministry of Education, The Development of Culture and Education in Kuwait Throughout the Last Five Years, November 1972. "In the Preparation of Teachers and Training Them", p.5.
The Ministry of Education stipulations were recorded in Ministerial Decree No. 102/70, Ministry of Education.
27. Personal communication with the Headmaster of Shuwaikh Training Centre, Al-Bader, March 1974. It remains to be seen exactly how stringently the government impose this sanction, as prima facia it seems to be inconsistent with Article 41 of the Constitution. Previously the government has been unwilling to inflict hardship, particularly on Kuwaiti males who qualify for the vote.
28. Ministry of Social Affairs and Labour, Shuwaikh Industrial Training Centre, October 1971, p.3.
29. The details of the current operation of the project are found in the Plan of Operation, Shuwaikh Industrial Training Centre, United Nations Development Programme, 1970.

30. These figures were calculated by using several publications all entitled "Shuwaikh Industrial Training Centre", and issued by U.N.D.P. as project reports between 1970 and 1974.
31. The Director of Shuwaikh Industrial Training Centre, Al-Bader, advised me of this in March 1974.
32. See: U.N.D.P., Projects Financed Under Funds In Trust, Section 7, n.d., for a fuller account of this institution's activities.
33. See footnote 26.
34. Blaug, M., Education and the Employment Problem in Developing Countries, International Labour Office, 1974, p.22.
35. Personal communication with the Under Secretary for General Education, Hassan Al-Mehri, February 1975.
36. Arrayed, J.E., op.cit., p.2., and also Salaitti, Hamad, Impact of Population and Manpower Problems on Strategies for Educational Development in Bahrain, Ministry of Education, n.d., p.12.
37. Salaitti, op.cit., p.9., and also Hassan Mehri, General Education in Bahrain, Ministry of Education, n.d., p.3.
38. Salaitti, H., op.cit., p.12.
39. Al-Hamer, A.M., The Development of Education in Bahrain 1940-1965, Oriental Press, Bahrain, 1969, p.10.
40. Ibid., p.70.
41. Ibid., p.71.
42. Arrayed, J.E., 'Major Trends and Recent Changes in Bahrain's Educational Policies', a paper presented to the 23rd Session of the International Conference on Education, Geneva, 1971, p.2.
43. Rumaihi, M., The Social History of Bahrain, Ph.D. Thesis, presented to Durham University, June 1973.
44. Winder, R.B., Education in Al-Bahrayn - The World of Islam, London, 1959, p.310.

45. For example, see Al-Hamer, A.M., The Development of Education in Bahrain, 1940-1965, Oriental Press, Bahrain, 1969, p.7.
46. A full account of the early development of education in Bahrain is given in Al-Hamer, op.cit., 1969, and an administrator's personal experience of education is given in Belgrave, C., Personal Column, London 1960. Rumaihi, M., op.cit., 1973, also provides evidence on the social aspects of education in Bahrain.
47. All Muslims divide into one of two sects: "Shia" and "Sunni". "Sunnis" regard themselves as the orthodox sect, and, in the Islamic world, greatly outnumber the "Shia". The "Shia" are mostly found in Iran, Iraq and Kuwait, and a few in Oman. The Iranian influence on Bahrain is thought to be the origin of the Shia presence there.
48. Al-Hamer, M., op.cit., 1969, p.8.
49. Details of this survey are found in Al-Hamer, op.cit., 1969, Chapter IV, p.53.
50. Al-Hamer, op.cit.
51. Belgrave, C., op.cit., 1960, p.93.
52. Personal communication with officials of Manama Technical College and the Under Secretary for General Education, Hassan Al-Mehri.
53. This was one of the conclusions of Abdul Malik al-Hamer's study, op.cit., 1969.
54. Salatti, op.cit., p.9.
55. Ministry of Education, Bahrain's Mens' Teacher Training College, n.d.
56. The official who put these two suggestions forward was the Under Secretary for General Education, Hassan Al-Mehri, in February 1975.
57. Ministry of Education, Educational Statistics 1973/74, "Higher Education".
58. Socknat, J., Projection of Manpower Demand and Supply, 1971-1986, and Policy and Programs Suggestions for Bahrain, Manama, Bahrain, 1974.

59. Tabbara, S., Report on the Present Situation and Problems of Vocational Training Administration, Ministry of Education, June 1974, p.5. See also: Ministry of Education 'Technical Education and Vocational Training', a paper presented to the Seminar on the Coordination of Education and Employment, Bahrain, December 1974, p.1.
60. At the seminar on the Coordination of Education and Training, several instances of this problem were cited. For example, see Brown and Root, 'Petroleum and the People: The Bahrainisation of Root and Brown', and the paper by Abdulla Ahmed Nass.
61. W. Joliffe, Alba Paper for Ministry of Education Seminar, December 1974, p.8.
62. Gulf Air, Manpower and Training in Gulf Air, p.3.
63. Moloney, D.F., The Bahrain Petroleum Company Ltd., p.3.
64. Personal communication with Said Tabbara and Manama Technical School staff.
65. Socknat, J., op.cit., 1974, p.210 and 211.
66. Information Department, Qatar, Qatar into the Seventies, 1970, p.54.
67. Ibid., p.55.
68. Ibid., p.54.
69. Ibid., p.56.
70. Ibid., p.54.
71. Ibid., p.55.
72. Ministry of Education, Qatar, Annual Report 1968/69, "The Development of Education", p.73 (Arabic).
73. Ibid.,
74. Ibid., p.85.
75. Ibid., p.74.
76. Ministry of Education, Qatar, Higher Studies Section, Students Studying Abroad, 1973/74, Table 1, (Arabic).

77. Socknat, W., op.cit., 1975, Appendix 40, p.2.
78. Ibid., Appendix 41, p.1.
79. This was reported during an interview with staff members in November 1973.
80. These include carpentry, welding, fitting and turning, refrigeration and air conditioning.
81. The details of the projects are contained in United Nations Development Program, Technical Evaluation of the Work of the Project, Geneva, 1974.
82. Training which is based on modules is a "job" orientated approach, which equips the trainee with the necessary "modules" of knowledge and skill in various branches of engineering. The more conventional approach is to train entirely in one field comprehensively. With the modular approach, a graduate possesses much more job flexibility, and can add to his knowledge by adding further "modules" in a very short time.
83. Socknat, J., op.cit., 1975, Appendix 43, p.4. QR.300 = approximately £35.
84. Interview with Faiez Kaddura, February 1975.

CHAPTER 7.CONCLUSION.

In this final chapter we summarise the more important conclusions of the research.

It is, by now, clear that the three countries in our study have experienced an unusual, but recognisably similar type of economic development, in which oil has played the dominant role.

Qatar emerges as possibly the least developed, though enjoying the highest level of oil revenues on a per capita basis. With a very small indigenous population, economic development relies extensively on expatriate assistance.

In contrast, Kuwait possesses the largest population amongst Gulf Sheikhdoms, and enjoys substantial oil revenues. The improved government "take" on a barrel of oil since 1973 has probably affected Kuwait more than any other state. Before 1973 her economy had begun to develop rapidly, and had moved beyond the stage of infrastructural investment into the field of industrial development. However, as Kuwait's industrial sector expanded, so did the expatriate population. By 1976, probably more than one half of her population of about one million persons was of expatriates. The economy has come to depend on this group both in industry and government. Non-Kuwaitis have tended to fill positions which require technical or professional skills, and to supply the quantitative needs of Kuwait's industry for manpower. Recently this dependance on expatriates has come to be seen as a constraint to further economic expansion.

In some ways Kuwait's economic development is characterised by features which are the opposite of the norm.¹ The share of all employment which tertiary sectors account for is diminishing, while that of

the secondary sector's is expanding; usually the trend is in the opposite direction. Her dependance on oil has, if anything, increased in the last four years. Gross National Product per capita seems certain to fall in the medium term, given the current rate of population growth, and the relative stabilisation of the price of oil in real terms. Each of these phenomena can be explained within the context of Kuwait's economic expansion, but taken together they appear to represent an experience of economic development different from what is conventional.

The relative poverty of Bahrain, and her dwindling oil reserves have encouraged the search for alternative sources of income to oil extraction. While all three countries see this as an aim of their economic development, only Bahrain has managed much success in achieving it. Now, there is a sizeable industrial sector, which is independant of oil reserves, and which is run almost entirely by nationals. Employment in the "tertiary" sector is quite unlike Kuwait's, as much of it either earns foreign exchange, or directly aids productive activity. A relatively small proportion is found in government employment. Despite (or perhaps because of) her relative poverty, Bahrain has developed without large numbers of expatriates, and also, over a relatively long period. The ultimate exhaustion of Bahrain's oil reserves will have a depressing effect on the economy, but the current variety of non-oil activities and the continued prosperity of her neighbours will enable her to maintain a comparable standard of living.

All three countries have set priorities for investment in their human resources which are likely to enhance their plans for economic development, but the degree of success in achieving their objective varies.

In Kuwait the educational system and training institutions do not appear to be meeting either the aims of educationalists, nor the economy's need of manpower. Kuwaitis have tended to concentrate on acquiring qualifications for administrative and clerical jobs, and they have entered government service in those jobs. However, the emphasis within the educational sector is on science qualifications, and within the economy there is relatively an excess demand for engineers and technicians. The mis-match between the qualifications and aspirations of school leavers and the more socially valuable jobs has occurred partly because of the divergence between social and private rates-of-return to education and training, and partly because of the changing demands of the Kuwaiti economy. The divergence between private and social rates-of-return to educational investment is largely the result of the government's employment policies, which in effect are contradictory to the aims of her development of human resources. Government statements show an appreciation of this problem, but the basic determinants of its solution, relative pay rates for Kuwaitis in government service in different jobs have yet to be adjusted. Until they are, the contribution of Kuwait's investment in her human resources to her economic development will remain very limited.

The development of human resources commenced in Bahrain many years before it did anywhere else in the Arabian Gulf, and included industrial training (in Bapco) almost from the beginning. In order to maintain the contribution of human resources to the economic development of the island, educational and training institutions will have to adapt continually to the changing demands of the labour market. With so little oil, Bahrain can scarcely afford to make wasteful investments in her stock of human capital.

Qatar has now established a national framework of educational and training institutions. Most Qatari six year olds are in school and the country has its own "higher" educational institute. Kuwait's experience of the development process is invaluable for Qatar, as she is now endowed with a similar allocation of resources to that of Kuwait twenty years ago. Before Qatar can develop her educational policy, the government must choose between alternative paths of economic development, one of which is industrialisation. At the present time (1976) there is every sign that the government intends to develop a significant industrial sector. If the government also intends to persuade Qataris to work in this sector, then it is essential that an employment and incomes policy is established, designed to persuade Qataris to do so. The more general point which concerns this choice is that although it may be difficult at the present to see the importance of determining policies of economic development and human resources development, which are mutually consistent, given Qatar's relative affluence, a consideration of the problems which now face Kuwait would show clearly the consequences of divergent policies in those two spheres.

In conclusion, one point has emerged from this study which, although not novel, remains very important. It is that the successful development of human resources depends on not only an appropriate educational structure and policy, but also on a series of external factors, particularly the labour market, over which educationalists have no control.² In our three countries, it is the task of the government to ensure that economic and educational policies are at least not contradictory, as, in some cases, they are now.

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1. Ragaei, El Mallakh, op.cit., 1968, argued a similar point that Kuwait was a country in limbo "between the under-developed and the developed", p.237.
2. See I.L.O., Growth, employment and equity, a comprehensive strategy for the Sudan, Geneva, 1976, for the most recent of that organisation's employment mission. In it, and in the six preceeding studies in the same series, the inter-relationship between human resources development, economic development and employment are emphasised.

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Included here are the principal works and sources which have been consulted. In addition to them the author has used a variety of secondary sources, including newspaper articles and popular magazines, unprinted materials and other documents. These are not included in the bibliography, although when they are used they are foot-noted in the text.

Many of the primary sources are in Arabic. The title and details of the work are translated as exactly as possible into English, and a note entered to indicate that the original was in Arabic - thus (Arabic).

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